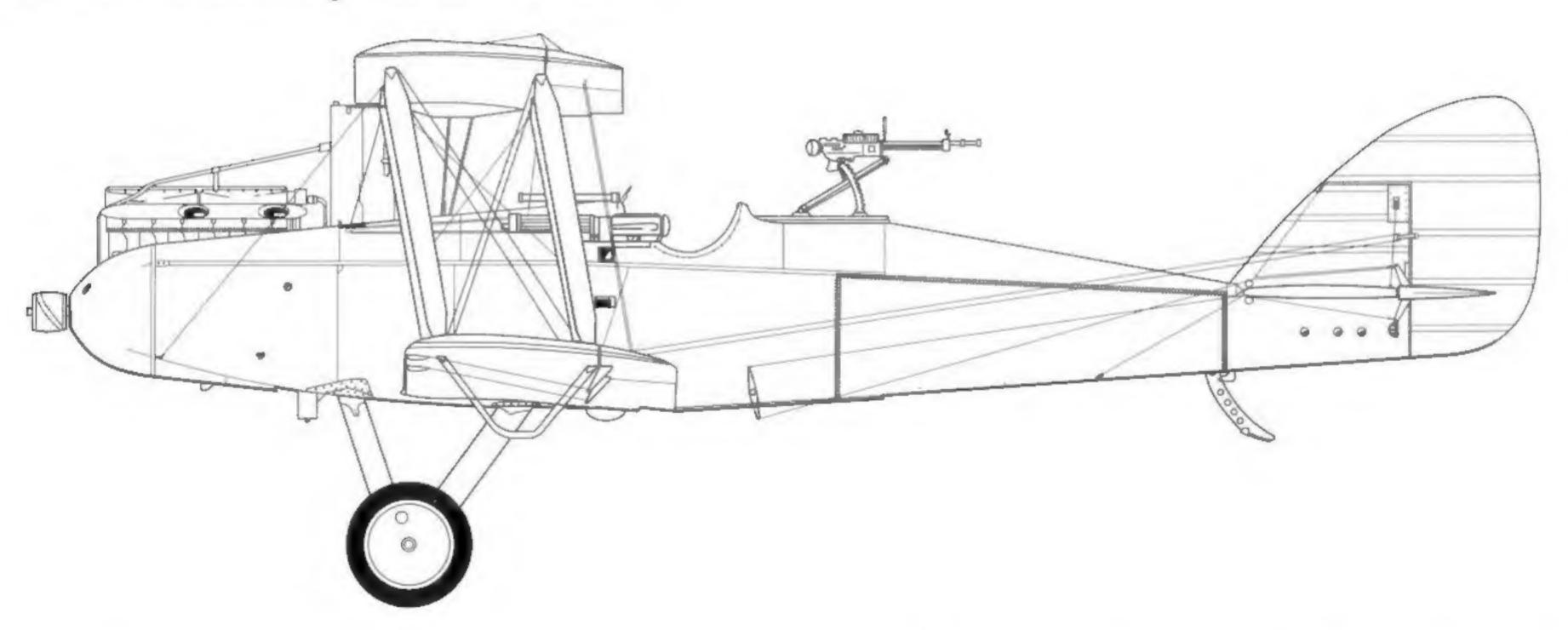
# de Havilland D.H.9



# de Havilland D.H.9 oter Cooksley in action

By Peter Cooksley Color by Don Greer Illustrated by Joe Sewell



Aircraft Number 164 squadron/signal publications



The observer of a RAF D.H.9 prepares to engage a German Fokker D VII fighter over the front lines during the early Spring of 1918.

## Acknowledgements

The photographs used in this Work have been drawn from a number of contacts apart from the author's personal collection, so that I would like to gratefully acknowledge the following sources and contributors:

The Alexander Turnbull Library of New Zealand

G. Stuart Leslie (keeper of the J. M. Bruce/G. S. Leslie Collection)

John Blake Maurice Brett
Frank Cheesman W. J. Evans
V. J. Garwood G. Kinsey
Kenneth Molson Alan Mooney
R. G. Moulton Colin Owers

Bruce Robertson

## Author's Note:

de Havilland wartime aircraft were known by the designer's name although produced by the parent company, Aircraft Manufacturing Co. Ltd. The very first was identified by a rudder logo consisting of a horizontally tapered letter 'H' with the mid bar formed by the letters 'de'. When the organization was renamed "Airco" in September of 1918, a new logo was adopted, but this was of brief duration, since the title was again changed to de Havilland Aircraft Co. Ltd. on 25 September 1920.

#### COPYRIGHT 1996 SQUADRON/SIGNAL PUBLICATIONS, INC.

1115 CROWLEY DRIVE CARROLLTON, TEXAS 75011-5010

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by means electrical, mechanical or otherwise, without written permission of the publisher.

ISBN 0-89747-365-5

If you have any photographs of aircraft, armor, soldiers or ships of any nation, particularly wartime snapshots, why not share them with us and help make Squadron/Signal's books all the more interesting and complete in the future. Any photograph sent to us will be copied and the original returned. The donor will be fully credited for any photos used. Please send them to:

Squadron/Signal Publications, Inc. 1115 Crowley Drive Carrollton, TX 75011-5010

Если у вас есть фотографии самолетов, вооружения, солдат или кораблей любой страны, особенно, снимки времен войны, поделитесь с нами и помогите сделать новые книги издательства Эскадрон/Сигнал еще интереснее. Мы переснимем ваши фотографии и вернем оригиналы. Имена приславших снимки будут сопровождать все опубликованные фотографии. Пожалуйста, присылайте фотографии по адресу:

Squadron/Signal Publications, Inc. 1115 Crowley Drive Carrollton, TX 75011-5010

軍用機、装甲車両、兵士、軍艦などの写真を所持しておられる方はいらっしゃいませんか?どの国のものでも結構です。作戦中に機影されたものが特に良いのです。Squadron/Signal社の出版する刊行物において、このような写真は内容を一層充実し、興味深くすることができます。当方にお送り頂いた写真は、複写の後お返しいたします。出版物中に写真を使用した場合は、必ず提供者のお名前を明記させて頂きます。お写真は下記にご送付ください。

Squadron/Signal Publications, Inc. 1115 Crowley Drive Carrollton, TX 75011-5010

This D.H.9 (D2876) was the first of a batch of 400 aircraft built by Airco at the companies Hendon, North London facility.



Links TEE

### Introduction

There is little doubt that the German air raid carried out in broad daylight on 13 June 1917 made a strong impression on the British War Office, since London itself had been the target. Only eight days later the decision was made to increase the strength of the Royal Flying Corps to a total of ninety-two squadrons, the majority of these to be day-bomber units with which retaliatory attacks could be made against German targets.

In that same month a new machine, intended to replace the proven de Havilland 4 bomber, made its first flight at Hendon, North London. This new design was the D.H.9, described as being faster, and capable of carrying a greater load over an increased range.

Except for a difference in the nose contours, the D.H.9 closely resembled the earlier D.H.4 bomber, the alterations to the cowling having been brought about by the early adoption of the new and unproven 230 hp Siddeley engine, a lightened version of the B.H.P. (Beardmore-Halford-Pullinger) that powered the first production versions, the new engine, however, soon proved to be incapable of delivering the 300 hp expected of it.

The new de Havilland 9 retained the same wings and tail unit as its predecessor, but the fuselage was completely redesigned with the pilot and gunner now positioned closer together. This arrangement also allowed for an improved forward view no longer obstructed by the

wings, as well as permitting immediate communication between the crew. In addition, a measure of engine temperature control was now possible with the aid of a retractable radiator mounted beneath the nose, a refinement not incorporated in the earlier D.H.4 from which the D.H.9 had been developed. Indeed, the prototype of the new bomber had been created by extensive modification of a D.H.4, A7559, which finally arrived at Martlesham Heath in October of 1917. The fuselage forward section was plywood covered and the rear section consisted of a fabric covered box girder, except for the portion under the tailplane which was plywood covered. Armament consisted of a fixed forward firing .303 inch Vickers machine gun and a flexible .303 inch Lewis gun on a Scarff No. 2 ring mount in the rear cockpit.

It quickly became clear, however, that all was not well with the new type, for one of the first reports to be issued on its tests indicated that even without its internal bomb load, the D.H.9 was only capable of a maximum speed of some 110 mph compared with the 106 mph achieved by the D.H.4, powered by a similar engine, at a like altitude and with a load of bombs. Even so, the pressures of war demanded that such indicators had to be ignored, and

The first D.H.9 produced by Airco, C6051, during its test period in November 1917. The aircraft was shipped to France in the following month for operational evaluation by No 27 Squadron. It may have also been tried by other units since it did not return to England until the end of February 1918.



the first production D.H.9 was soon sent to France for operational evaluation by No 27 Squadron which received C6051 in December of 1917.

Meanwhile, the possibility of powering the D.H.9 with a Fiat A.12 engine was being investigated, and although a number of these engines were delivered, it was made clear at the time that the Siddeley Puma was regarded as primary engine for the D.H.9, and the Italian engine was to be no more than an emergency substitute should the supply of Pumas fail. Even so, some D.H.9s were fitted with 260 hp Fiats. Even though there were signs that the new type was unlikely to meet the desired criteria, production went ahead, despite warnings by men like Major-General Salmond, who had an intense dislike of the type and stated that it would be outclassed by June of 1918. Opinions such as these were countered on behalf of the Government by Sir William Weir, who made it clear that it was to be the D.H.9 or nothing, as the Air Board had decided in favor of the type and orders for large numbers had already been placed. As a result the type was in service with operational squadrons in France by April of 1918, although the frequency with which engine failures were reported meant that the D.H.4. which the D.H.9 was intended to replace would have to be retained in service alongside the new bomber. Problems with the BHP engine, resulted from the fact that it was virtually obsolete by the time it had been produced in sufficient numbers. Indeed, the first example would not even fit the D.H.4s for which they had originally been intended, and had to be rebuilt.

In addition to service in France, from where D.H.9s were operated as the key bombers of the RAF's Independent Air Force to make strategic attacks on the Rhine industrial centers, they were soon to be found in the Palestine and Macedonian theaters, as well as engaged in anti-

Zeppelin patrols at home and on submarine-hunting in British waters. Later they would be used to inaugurate the mail service for the Army of Occupation across the English Channel, only a few weeks after the signing of the Armistice in November of 1918.

As a consequence of the vast quantity of D.H.9s (over 3,000) which were constructed to replace D.H.4s, a huge stock became available for the civilian market, not only ex-RAF machines struck off charge in favor of the later D.H.9A (a type that owed more to the D.H.4 than the D.H.9) but also a large number of D.H.9As which were set aside for disposal fresh from the assembly lines.

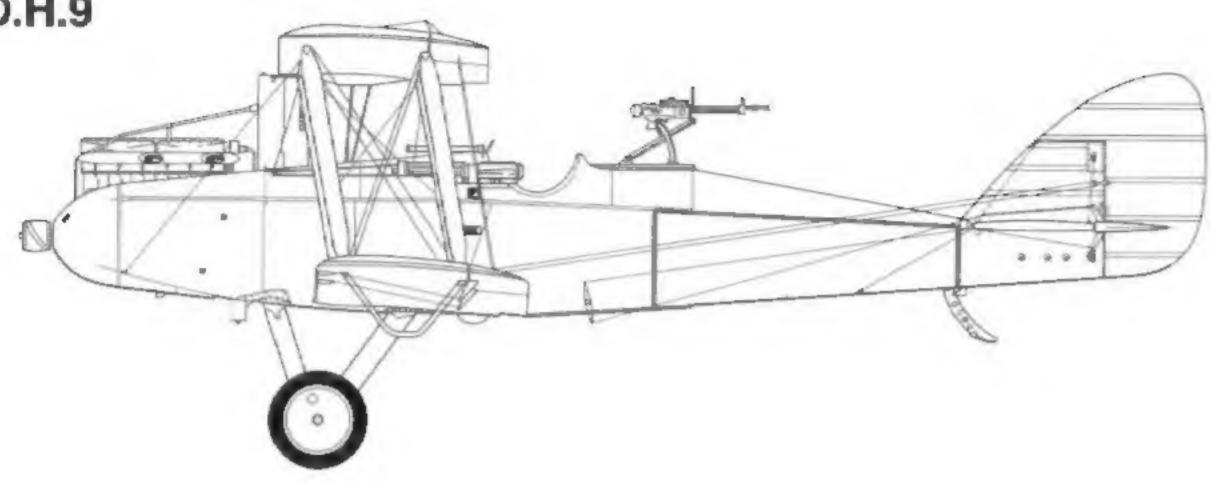
As a result, the type was quickly procured for use by a number of embryo air forces, including that of South Africa, which operated an interesting variant, or were employed by the newly-emerging civil air transport world. Many of these machine were converted to multi-seaters and some were out-fitted as cabin types. The first cabin types were unglazed, making it was necessary for passengers to wear long protective leather coats, heavy gloves, helmets and goggles.

Of the first four aircraft entered on the British Civil Register in 1919 after the adoption of an alphabetical identification system, three were D.H.9s; G-EAAA (ex- C6054), 'AAC and 'AAD. Indeed, the last surviving airworthy D.H.9 was probably the machine used for early inflight refueling trials by Alan Cobham until 1934. Three years later it is recorded as having flown at Banworth aerodrome in connection with the Empire Air Day celebrations. It was finished in a Pale Mauve color scheme with a deeper shade of the same color for the turtle deck and lettering. The lettering on the upper wings was described as being very closely spaced.

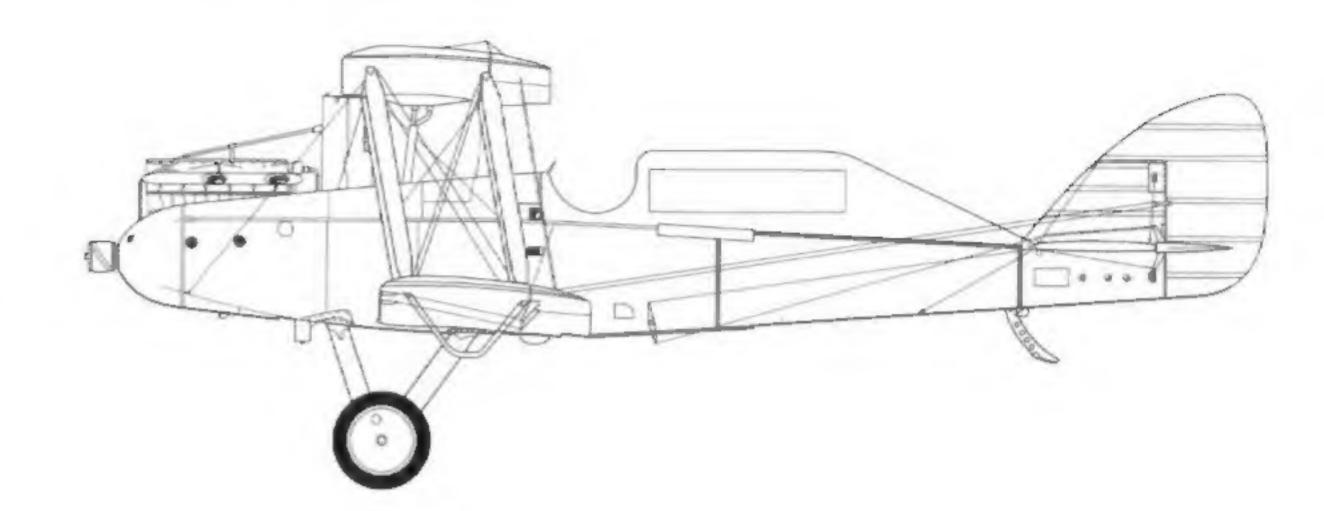


### Development

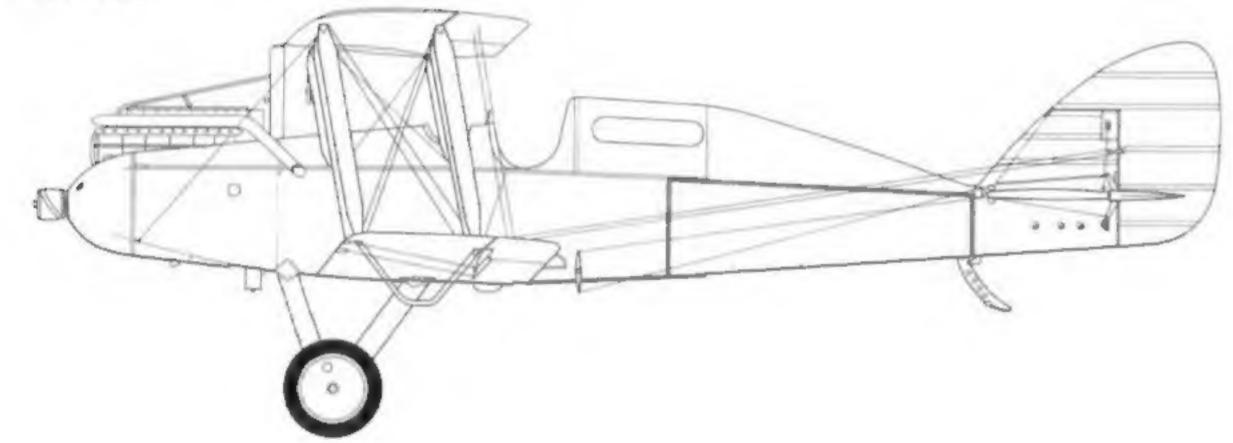
D.H.9



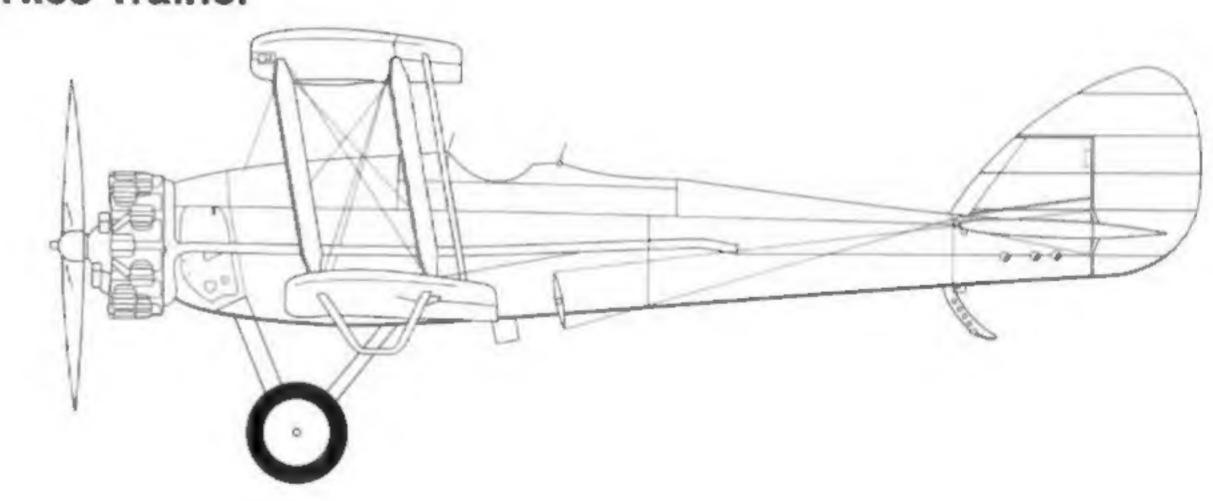
D.H.9 Ambulance



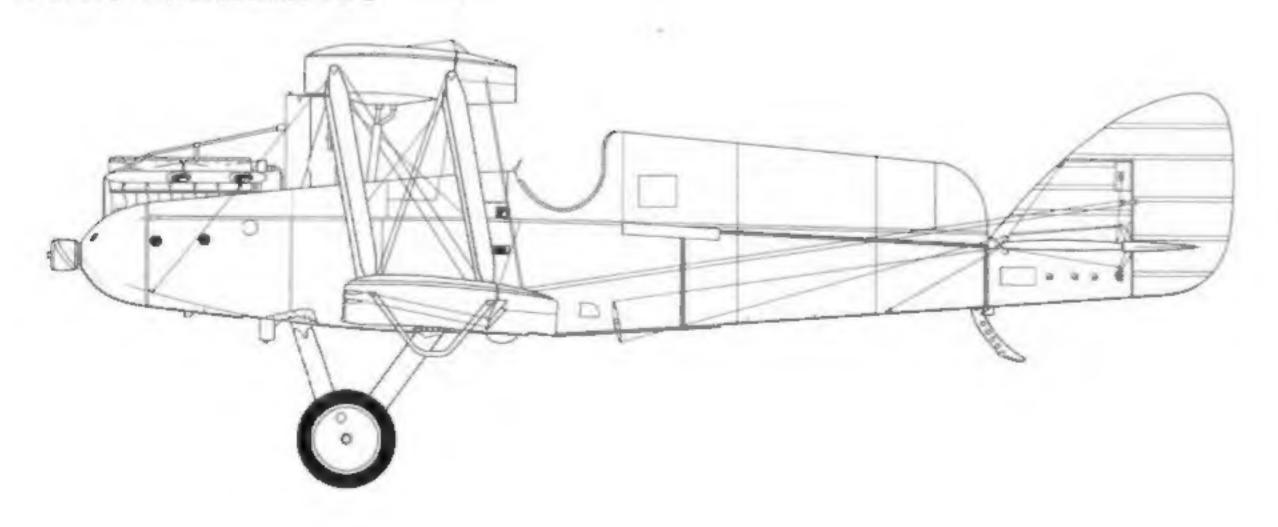
D.H.9C



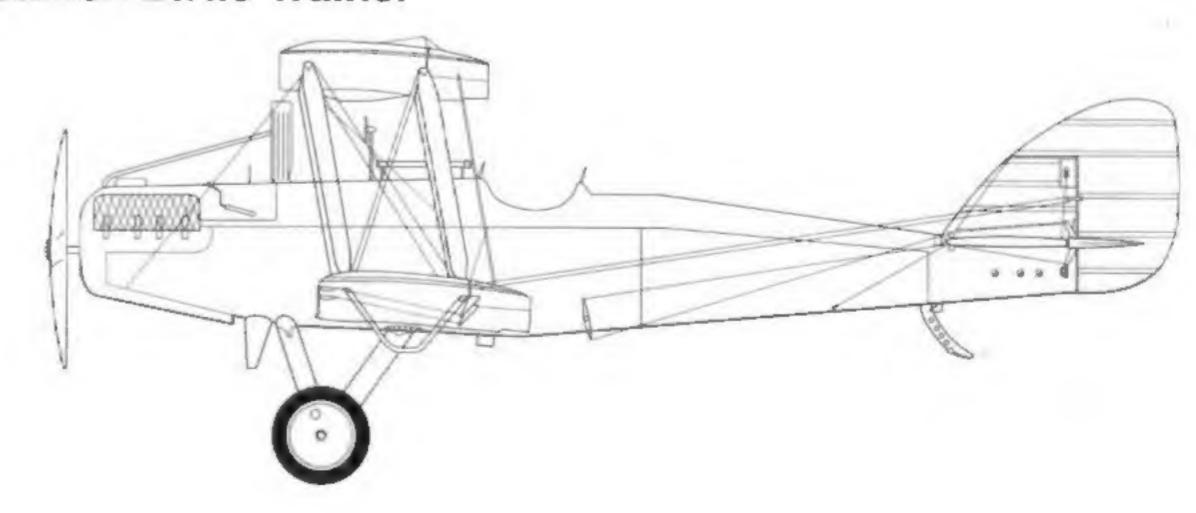
**D.H.9J Trainer** 



D.H.9 Ambulance



Spanish D.H.9 Trainer



# The D.H.9 Goes to War

By the time that the Royal Air Force was formed on 1 April 1918, almost four hundred D.H.9s had been constructed, although none had seen action against the enemy. The type never saw active service with the precursor of the RAF, the Royal Flying Corps which ceased to exist with the formation of the new British air arm. Before its dissolution, however, the RFC had begun to form new bomber squadrons to be equipped with the new day bomber, and over thirty had already gone to France. Eventually, a total of twenty-seven squadrons were to be equipped with the type, with those of No 206 Squadron being the first to see action, making two attacks on the Don railway station on 2 April. This was soon followed by assaults against other targets, and a week later the unit was joined by the D.H.9s of No 98 Squadron for raids on German installations. German lines of communication became subsequent targets, being attacked in the main with 112 pound bombs, and it was at this time that reports began to contain such phrases as "single machines could seldom climb above 14,000 feet with one 230 pound or two 112 pound bombs in 75 minutes," and units in the field began to realize the handicap imposed by the engine choice on what was otherwise a perfectly sound design.

There were a number of missions where the number of bombers actually reaching the target was far below those detailed to go on the raid. For the most part, the aircraft failing to bomb had to abort the mission due to engine problems. On one mission, twelve aircraft of No 99 Squadron took off to bomb Mainz. Enroute to the target the formation (short three aircraft

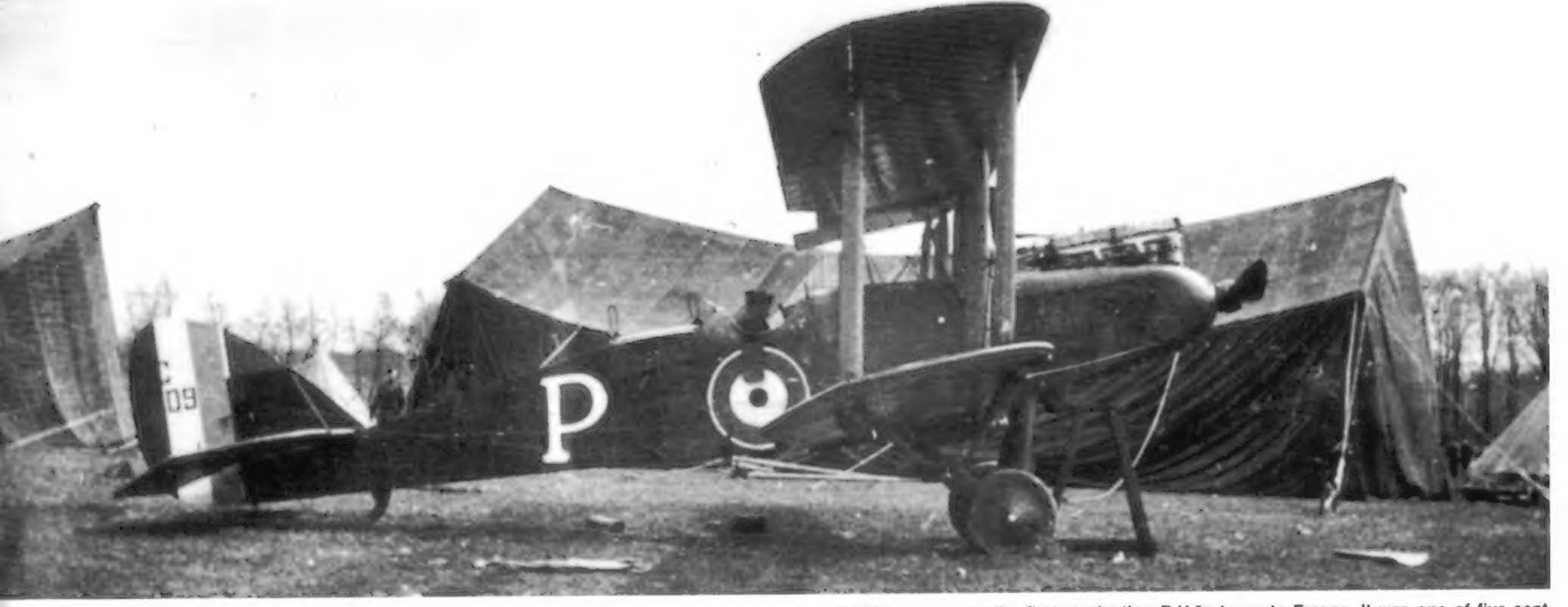
that turned back with engine trouble) was attacked by some forty German fighters. The flight leader switched targets to Sarrbrücken which was closer. In the fight, seven D.H.9s were shot down, and only the arrival of Allied fighters saved the rest. Of the crews that were shot down, five were killed and the rest were taken prisoner. As a result of this mission, the squadron had to stand down until replacements arrived and additional combat formation training was conducted.

Even with the engine problems, the D.H.9 could give a good account of itself in air-to-air combat. On one occasion, the observer of a No 49 Squadron D.H.9 shot down four enemy fighters that were attacking the unit. One pilot reported that, after dropping its bomb load, a D.H.9 could turn with a Fokker D.VII and could be tightly looped.

Thanks to its poor engine, which limited altitude (13,000 feet) and speed (97.5 mph), the D.H.9 squadrons were restricted to raids in areas that were within the range of friendly fighters. To the RAF, however, an aircraft that could not routinely deliver its bombs on target was a failure and the efforts of the squadrons operating the type were considered wasted.

These D.H.9s, believed to be of No 98 Squadron, RAF, are on the landing ground at Allonagure, a field used for aircraft enroute to Great Britain. The original manufacturer of F6073 (6) in the foreground is unknown since the serial was one allocated to aircraft rebuilt by repair depots in France.





This aircraft, serial C2161, was one of eighty D.H.9s built by the sub-contractor Berwick & Company of Park Royal, North West London. The aircraft was used at a gunnery school, possibly at Marske.

C6109 was among the first production D.H.9s to go to France. It was one of five sent abroad in late February of 1918. It was operated by No 27 Squadron RAF at Ruisseaville during 1918. On 16 June it was lost in action, with its crew, 2nd Lieutenant H. Wild and Sergeant E. Scott being killed. (W. J. Evans)

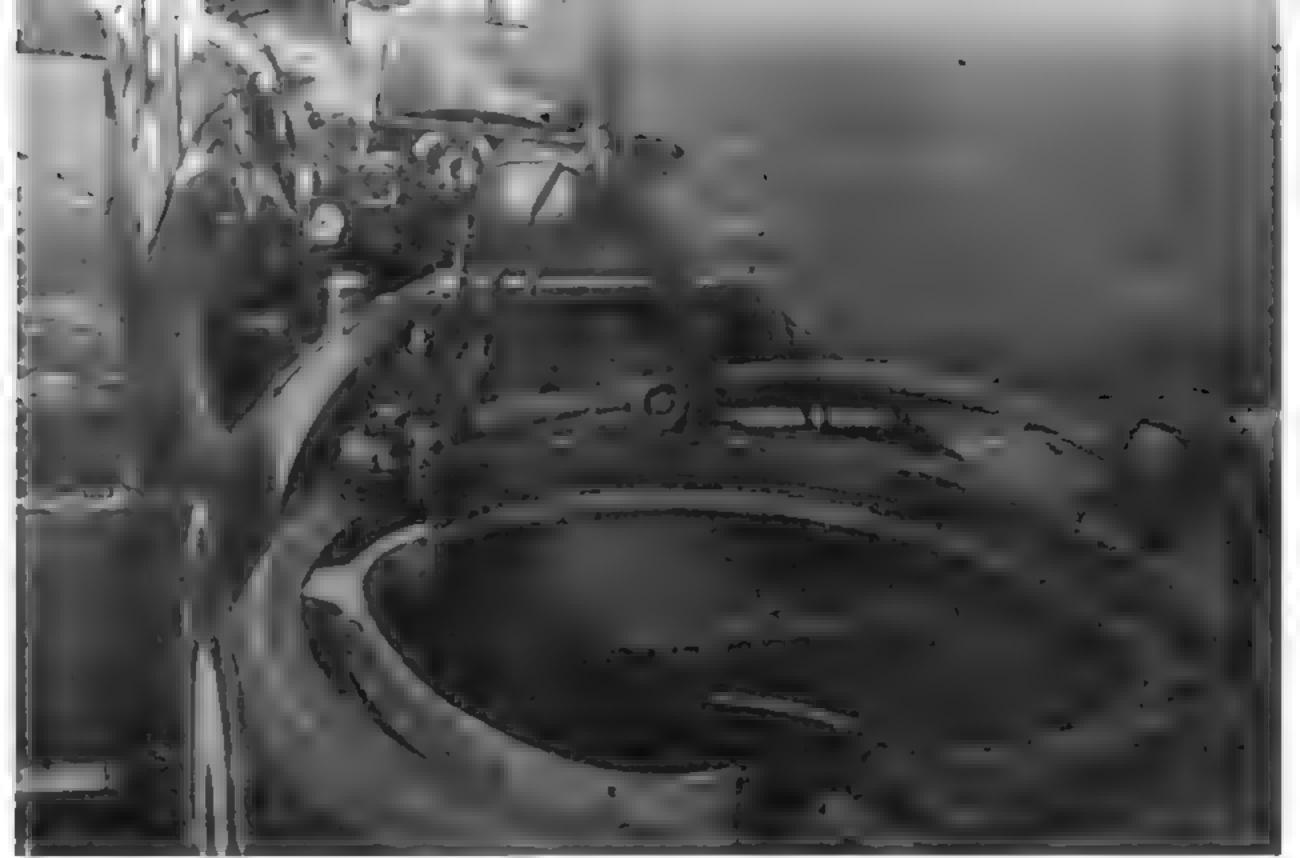
The individual aircraft number '3' was carried in White on the fuselage and repeated under the lower wings in Black. In March of 1918, this aircraft was known to have been at Manston (then Manstone) Kent and, although earmarked for export to Poland, was never delivered.





This D.H.9 was from a production batch of 300, several of which were destined to be delivered to overseas governments including those of the United States (one), France (one), Greece (one), Australia (three), India (two) and two to the White Russian forces. C6277 is believed to have served at one time at the Biggin Hill Wireless Experimental Establishment as a flying test bed.





A Fiat powered D.H.9 at the Martlesham Heath testing station. The gun next to the pilot's cockpit was a Vickers .303 inch machine gun and gunner's position was fitted with a Scarff ring for a .303 inch Lewis gun. (E. F. Cheesman)

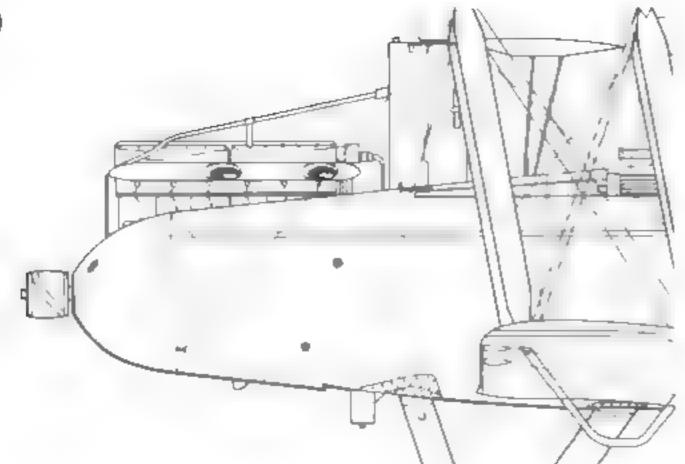
(Left) The application of comic faces to aircraft noses was not confined to the Second World War. Lleutenant O'Day and had this face painted on his D.H.9 at the Harling Road airfield. The propeller blades were Gray. The Station First Aid Post is visible in the background.

C1230 made a force landing due to engine failure at the School for Aerial Fighting. The aircraft serial number on the rudder has one style of lettering for the number and a different style for the prefix letter. The aircraft was examined by British Ace James B. McCudden, reportedly it interested him because he had flown a similar aircraft (C1215) on 14 May 1918. (J.B.McCudden via E.F. Chessman)



#### **Exhaust Variations**

#### D.H.9 (Early)



#### D.H.9 (Late)

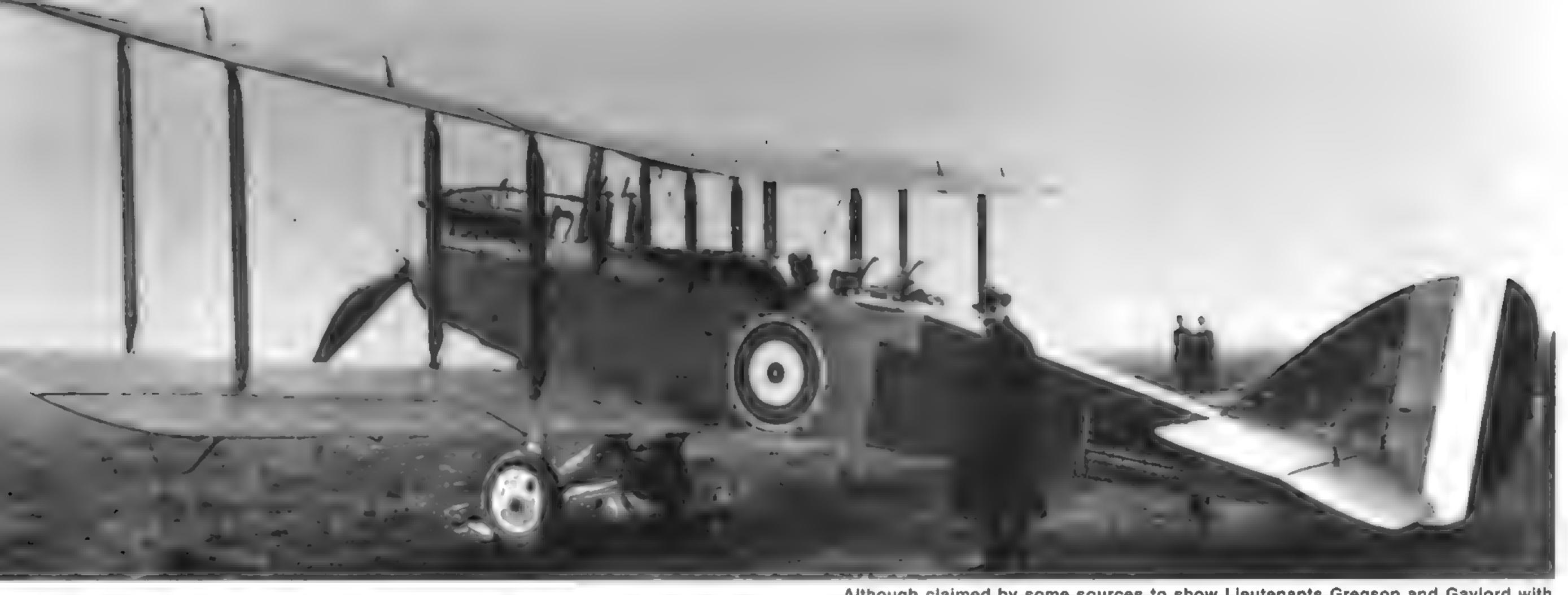
Angled Exhaust
Collector Tube



Although unidentified, this D.H.9, carrying the individual marking 'H' in White both on the fuselage side and under the nose, was very probably attached to 'C' Flight of No 49 Squadron, RAF. A Flight leader's streamer was attached to the rear strut of the port side inner bay of the wing struts. (V. J. Garwood)

Six D.H.9s lined up on 1 July 1918 in preparation for a bombing attack on Cattaro by aircraft of No 67 Wing.





Marked with its serial number in black on the rear fuselage and on the fin, D1001 was the first machine to be built by the National Aircraft Factory No 2 at Heaton Chapel, near Stockport, Cheshire.

Although claimed by some sources to show Lieutenants Gregson and Gaylord with D2803, this is unconfirmed. Of interest, however, is the horizontal exhaust pipe extended to the center section struts, the identity letter 'V' under the nose and the name 'DAPHNE' on the side.





It is not known which of the thirty-eight D.H.9s the Germans claimed to have brought down by September of 1918, but this D.H.9 is believed to have been flown by No 104 Squadron, RAF. Damaged tires, no wheel covers and the letter '0' on the nose are visible. There is another captured British aircraft at the left.

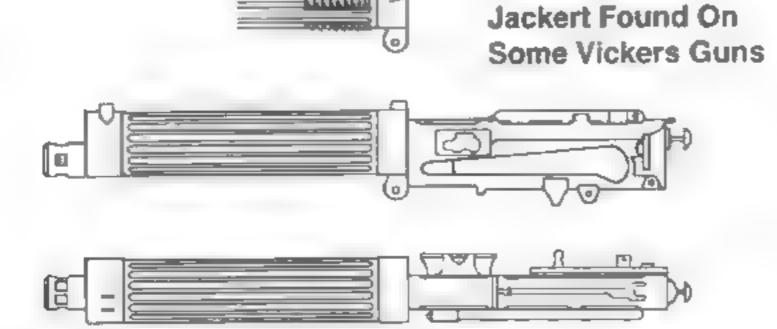
#### Armament

#### Observer's .303 Inch Lewis Gun

Single Mount

Twin Mount

Pilot's Vickers .303 Inch Machine Gun



**Louvered Water** 



This D.H.9 was used by the Wireless Experimental Establishment (WEE) at Biggin Hill, Kent. The aircraft (serial B7551) was Westland-built at Yeovil, Somerset, it was passed to Brooklands Aircraft Acceptance Park, Surrey on 28 March 1918 after having been flown by No 99 Squadron RAF. The serial number is repeated in small White characters on the fuselage under the tailplane.

A D.H.9 with the Individual letter 'A' extended into the name "Acme." The aircraft served with No 112 Squadron, RAF, which began specializing in reconnaissance and aerial photography during October of 1918. It flew missions supporting the 4th Army's last offensive, culminating in the capture of Maubeuge and Charleroi.

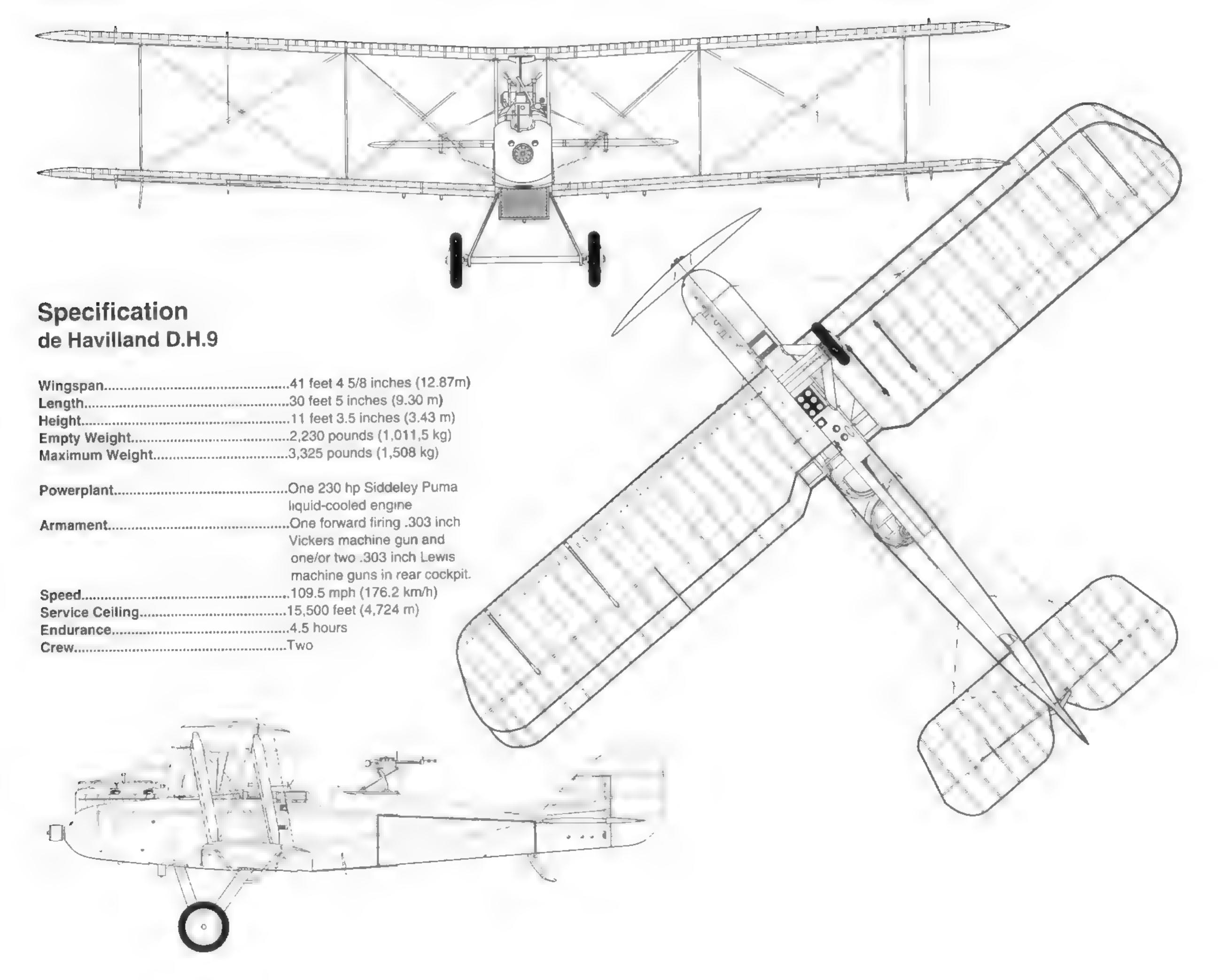




This D.H.9 (F1255), probably on the tarmac at Bickendor, was a late production machine constructed under sub-contract by the famous London store, Waring and Gillow. Several machines of this batch were sent to overseas governments including Australia, India, New Zealand, Belgium, Greece and Poland. One aircraft from this batch is currently on exhibit in Paris.

No records have been traced concerning this D.H.9, but it is unusual in that it carries a thick Black bar marking under both lower wing surfaces. Flight leader streamers were carried on the rear, outer wing struts. The aircraft in the background are Sopwith Camel fighters.





# **Engine Change**

The unreliability of the of the Puma engine meant that as early as mid September of 1917 a search was begun for an alternative power plant. The first such installation was made using an Italian 250 hp Fiat engine at the beginning of the following year, however, only a small unknown number of D.H.9s were actually fitted with the Fiat. The 230 hp Galloway Adriatic engine was another alternative being studied

In fact the need for an engine change became a parallel story to that of the aircraft's development. As plans were made to build the type in the United States, where 14,000 were ordered as USD-9s, it was decided that these aircraft were to be powered by 400 hp Liberty 12-A engine. In other countries too, the need to adapt the airframe to alternative engines was followed with some zeal, resulting in the fitting of either 420 hp Bristol Jupiter VI direct-drive engines, or 460 hp Jupiter VIII geared engines to D.H.9s in South Africa resulting in versions which were significantly different from the original design. These aircraft had oleo undercarnages, strut-connected ailerons, rounder rear decking and center-section gravity tanks. As a result of these changes, they were re-named as Mpalas. They were to remain in service, later as trainers, into 1937.

Indeed, the need to investigate alternative power plants was even felt in the civil field, resulting in the introduction of the D.H.9J during the mid-1920s. These were powered by 14 cylinder, twin-row Armstrong Siddeley Jaguar III air-cooled, radial engines. Also used for

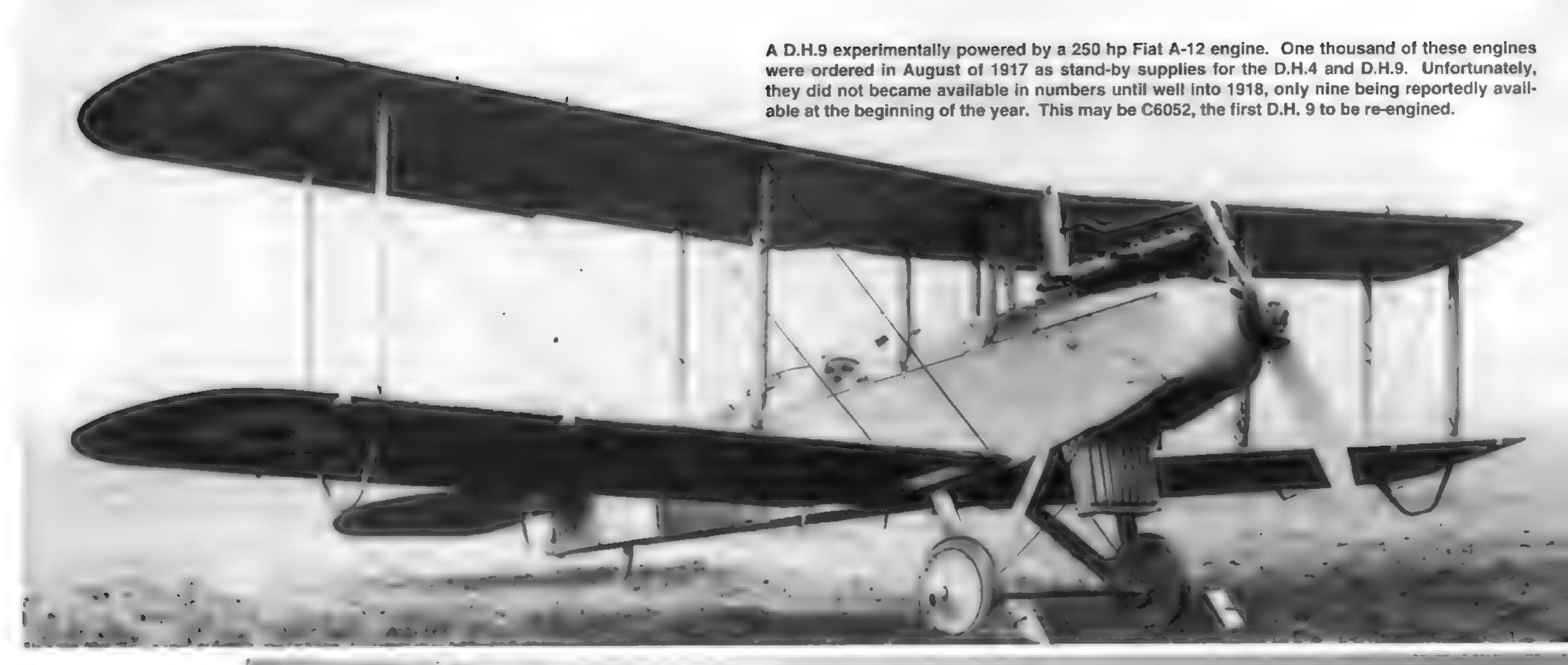


The first D.H.9 to be fitted with a 430 hp Napier Lion engine was C6078 which was completed by 15 February 1918 and made its first flight at Farnborough, Hampshire, the following day. It was still undergoing trials at Martlesham Heath In January of 1919. The following month it was returned to the manufacturers. (E. F. Cheesman)

training, they were fitted with rubber-in-compression undercarriages, strut-connected ailerons and wing slats.

A D.H.9 fitted with a production Napier Lion engine some time after the Armistice, possibly during the Winter of 1919-20.





The Fiat-powered D.H.9 can be identified by the fact that their exhausts were on the starboard side, opposite from the installation of the Puma engine. This aircraft is believed to be the only example of a Fiat engined D.H.9 supplied to France. (E. F. Chessman)



## Overseas

Despite its well-known shortcomings, all of which stemmed from its unreliable engine, the D.H.9 was to be found in the air forces of many countries, perhaps the most interesting of these being Belgium, the only country outside Great Britain to use the type operationally. Had the First World War lasted longer, however, the United States built examples would have been operating with the American Expeditionary Force. These aircraft would have been powered by the American Liberty engine under the designation USD-9. In the event, only nine had been built at McCook Field (serials 40060 to 40068) before production was canceled. In addition, only four (three being 40044, 40118 and 40119) were built by Dayton Wright before this contract was also canceled. It is known that the U.S. Naval Northern Bombing Group had four such aircraft in October of 1918, which had been assembled on the Naval Air Station at Poullac. The unit, attached to the Fifth Group, RAF, used them in eight bombing attacks conducted during that month and in the opening days of November.

The last RAF D.H.9s to see action were the twelve aircraft serving with "Z Force", a British unit operating with the Camel Corps against the "Mad Mullah" in Somahland for three weeks in January and February of 1920. Bombing missions by D.H.9s led directly to the Mullah's capture.

In addition, D.H.9s formed part of "Imperial Gifts" going to various parts of the Commonwealth, including Australia (twenty-eight), Canada (six) and New Zealand (nine). The forty-eight aircraft presented to South Africa later received a new lease of life due to new engine installations.

D.H.9s also served as part of the RAF's contingent with Denikin's White Russian Army, Twenty-eight D.H.9s received the Australian A6 prefix. Seven aircraft that were recorded at Point Cook were D1238; D3187; D3191; D3207; D3220; F1238 and F1295. The first Interstate night flights in Australia were made by the type in 1926, but four years later none were left in service. Four aircraft that had been given to aero-clubs remained in service and were not scrapped until 1933. (Colin Owers)





With only the first three characters of its serial (F12??) visible on the rear fuselage, this D.H.9 was part of the RAF's North Russian Expedition, operating in support of White Russian forces during 1919. The aircraft visible at the right are D.H.9As. It is believed that the aircraft were based at Bereznik.

those of No 47 Squadron operating from Ekaterinodar, while No 221's D.H.9s flew from Petrovsk.

Other foreign air forces also used the D.H.9 including Poland (twenty-two), the Netherlands East Indies (at least forty-six), Spain, Estonia, Japan (one), Eire (eight), Greece, Afghanistan, Chile, Iran, Latvia, Peru, Rumania. Switzerland (three) and the Nejd.

In Poland the aircraft was used in combat during the 1920 war with the Soviet Union. The

An overall Aluminum Dope Royal Australian Air Force D.H.9. The nose just behind the propeller is in Black and the fin appears to still be colored PC10. The rudder balance area is believed to be Blue, divided from the Blue rudder stripe by a thin vertical White line. The A-6 prefix denoted the type, with the numerical suffix being the aircraft's serial. A6-23 was probably used for Army Co-operation duties during the late 1920s.





This Royal New Zealand Air Force D.H.9 (serial 5636, simply its former RAF serial with the prefix letter dropped) has the rudder number repeated under the gunner's ring. It was later transferred to the civil register with the Canterbury Aviation Company as did most ex-RNZAF D.H.9s, except 3139 which joined the New Zealand Aero Tours Company.

aircraft operated with the 5th and 6th Squadrons of the 3rd Aviation Wing, flying low level bombing and strafing missions against Cossack cavalry units. The D.H.9s remained in service until the end of 1920, when the surviving aircraft were placed in storage. In 1924, they were refurbished and offered for sale. Five were sold to Estonia. Five other aircraft were retained and issued to the 4th Air Regiment as trainers.

The Estonian aircraft arrived too late to see combat when Estonia was invaded by the Soviet Union in 1919, however, the D.H.9s were to have a long and active role in Estonian

Service. The aircraft were used for airmail flights between Estonia and Finland and the last D H.9 in service was lost in a crash during 1933.

Spain not only acquired a number of surplus D.H.9 airframes, they also produced the aircraft under license. Spanish D.H.9s differed from standard aircraft in that they were re-engined with 300 hp Hispano-Suiza engines, which led to a modification of the nose contours. The Spanish D.H.9s also saw combat in North Africa, flying against rebels in Spanish Morocco. By the time of the Spanish Civil War, the aircraft had been relegated to the training role, and both sides used the aircraft for that mission during the war.

A RNZAF D.H.9 (serial 5636) shares the grass with two D.H.4s. New Zealand accepted nine D.H.9s during 1920, including ex-RAF H5609; H5627 (later G-AZAE); H5636 ('ZAD); H5672 ('ZAQ); D3136 ('ZAH) and D3139 ('ZAM)





This D.H. 9 (serial D2803) is believed to have crashed at Petrovsk in January of 1919 killing 2nd Lieutenant Machin. The overpainted roundel on the upper port wing tip is unusual as is the letter on the tailplane which seemingly augments the Individual Identification letter "I" above and on the sides of the fuselage. (K. Molsoa)

The RAF's "Z" Force, the final British operators of the D.H.9, included this aircraft, D3117, also marked as aircraft '6' on the forward fuselage. This D.H.9 was converted to an air ambulance capable of carrying two patients. The men wear sun helmets and the protective spine pads in use during 1920. The normal cut-out in the trailing edge of the upper wing center-section has been faired in.



## **Presentation Aircraft**

All nations engaged in both World Wars adopted the policy of encouraging the public to subscribe for weapons, perhaps due to the immense morale value of permitting citizens to feel personally involved in combating the enemy. In Great Britain this great achieved popularity when it was combined with the romantic attitude that surrounded flying, which had only became possible in heavier than air machines eleven years before the First World War broke out.

As a gesture of gratitude and recognition aircraft "purchased" in this way by towns, cities communities and wealthy individuals in the British Isles and abroad from Aden to Zanzibar were marked with the name of the donor, who was also presented with a photograph of the relevant aircraft duly marked, and to this end a large number of sign writers and photographers were involved in order to meet the official pledge.

By July and August of 1918, however, the practice had assumed such proportions that it ceased to be operable. As a result, it was directed that aircraft "purchased" by towns and Army units should have strips of fabric bearing the serial number of the machine subscribed for added before a photograph was taken irrespective of the real serial identity of the of the specimen involved. But whether a donor's name was ever added subsequently when the machine bearing the correct number became available is not known, and indeed seems to be in some doubt. In addition, photographs exist which plainly show aircraft with hand-painted donors names combined with serial numbers clearly added by means of fabric strips. This seems in contradiction of the official explanations offered at the time.

Even so, some nine hundred "presentation" aircraft of all types have been traced, indicating both the magnitude of operating the scheme and its popularity which reached its summit at much the same time as the D.H.9 was being produced in numbers. A cursory count reveals some forty machines of this type marked as presentation aircraft.

"Britons in Chili No 1" was serialed D1177 and carried the name on the fuseiage side in White from 28 December 1918 on. It was assigned to No 120 Squadron RAF after being previously on strength with No 98 Squadron during March of 1918. The D.H.9 was used as a mail-carrier and survived at least until 18 January 1919.





Built by the Vulcan Motor & Engineering Company, and carrying the company logo on the interplane struts, B9395 of No 49 Squadron, RAF was "The Mackenzie Toolocmbah, Presented", according to the inscription on the fuselage side by "Hugh and Murdo Mackenzie, Toolocmbah Station, Rockhampton, Queensland." It was also known as Australia No 28, Queensland No 3, and survived at least until 18 January 1919.

Although the identity of this D.H.9 has been lost over the years, it is believed to have served in Macedonia. It is unusual in that it has twin .303 Inch Lewis machine guns mounted on a Scarff ring mount for the rear cockpit gunner.

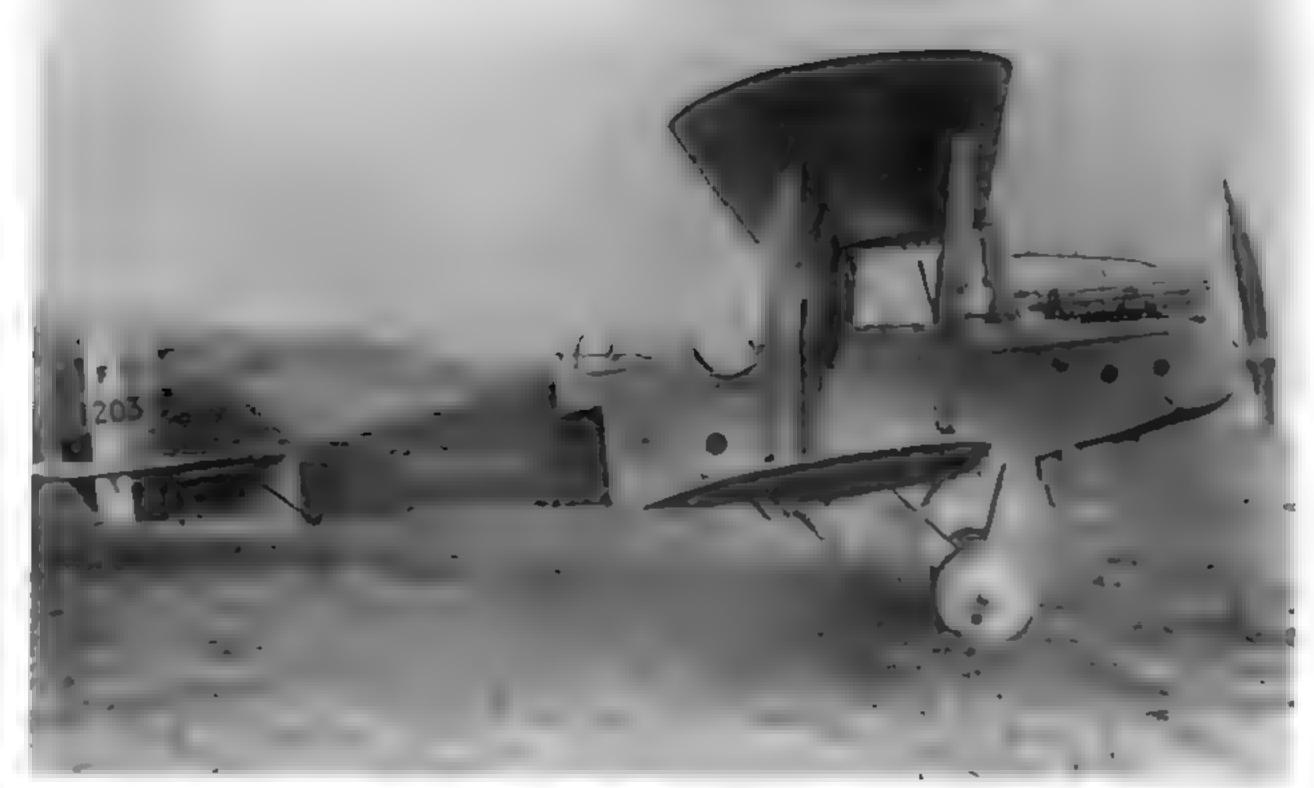




Although it is difficult to pick out, since it was painted in White against the Gray nose, this D.H.9 (serial D5816) carried the presentation legend "Faridkot No 3". This Indian presentation aircraft was constructed by Waring & Gillow and served with No 206 Squadron, RAF. 2nd Lieutenants T. Percival and Lowthian were both injured when it crashed on 7 August 1918. The aircraft carried the legend "W2 5816" under the gun ring and under the letter 'D' on the rudder.

The nose of this D.H.9 was marked with the presentation legend, "Royal Marines Plymouth" in White on the nose. It appears to have its serial marked mounted on a strip of fabric (which is a slightly different color than the background) and is unusual in that it has a dot after the prefix. It is believed that D.5656 is probably not its true identity.





"The Scarborough Volunteer" was marked with the fake serial F1203. The alreraft is believed to actually be a Waring & Gillow built D.H.9 (serial D5838) since it carries this marking, prefixed by "W2" under the gunner's ring similar to D5816. The name was painted on the fuselage in White.

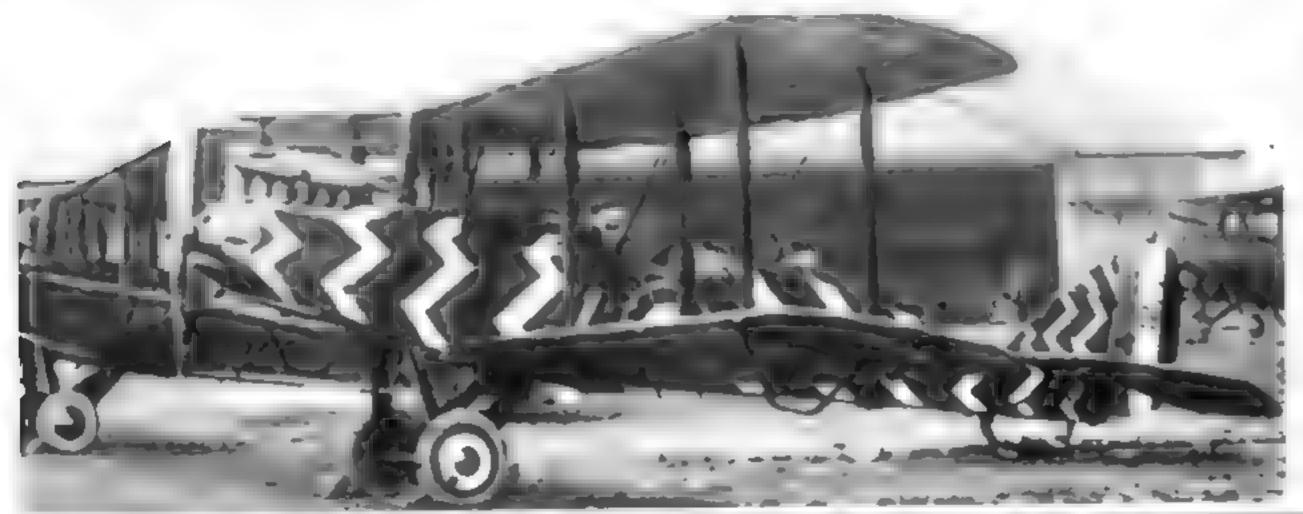
Subscribed for as "Rigger Parish No 4" according to the nose inscription, D3259 was an Airco-built D.H.9 from a batch which included a number of aircraft that were delivered to overseas air forces.



# Dope and Development

The appearance of the D.H.9 coincided with the an upsurge in the development of the technical side of military aviation with the result that, representing as it did the embodiment of the latest thinking in design (a claim that was not endorsed by actual practice) several examples of the type were pressed into use for trials of new equipment, and in at least two cases, investigation into fresh approaches to the question of camouflage/concealment. These experiments

This D.H.9 was probably used by the No 49 TDS (Training Depot Station) at Cetterick and, although almost indistinguishable, it carried the name "Lobster" on the nose in White. It also carried a zig-zag dazzle paint scheme on the fuselage. The two D.H.9s in the background are believed to be D2904 and beyond that possibly D1746.

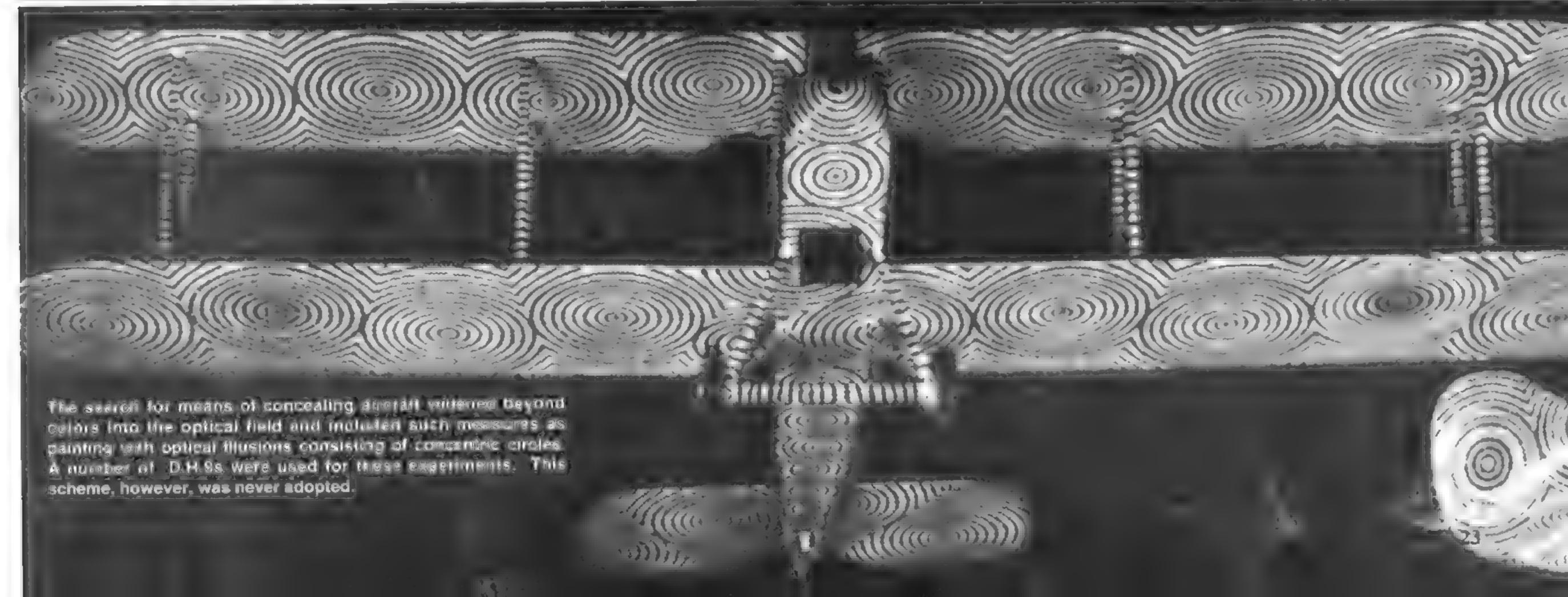




This is an Airco-built D.H.9 (serial D2904), but the reason for the United States star insignia on the cowling is unknown. Certainly it was never flown by the U.S. Army. From a comparison of tonal values it is believed that the fin, balance area of the rudder and wheels were Red, with a white outline. The lower longerons and parts of the decking and nose are clear dope. (K. Molson)

involved the use of specially-applied patterns rather than the employment of single overall colors, or combinations of colors

In the former field, one of the more interesting sets of trials were those carried out concerning an addition to the instrument flying instrumentation of the day. The new instrument was called the Static Turn Indicator and one was fitted to the Fiat engine test bed at Orfordness. Other experiments centered on the practicability of issuing parachutes for aircrews, luxuries up to that time in official disfavor, except for observers in captive balloons.





As the First World War drew to its close, the D.H.9 was pressed into service for trials of various types of parachutes, including the Mears canopy worn by this crewman. It is clear that the parachute relied on a static line attached to the aircraft for opening.



This D.H.9 is experimentally fitted with a camera gun above the upper wing center section, probably at a training station. Below, forward and to the left of the pilot's cockpit is a .303 inch water-cooled Vickers gun synchronized by a Constantinesco CC gear. The gun has a ring and bead sight, while to the right of this sight is an Aldis gun sight.



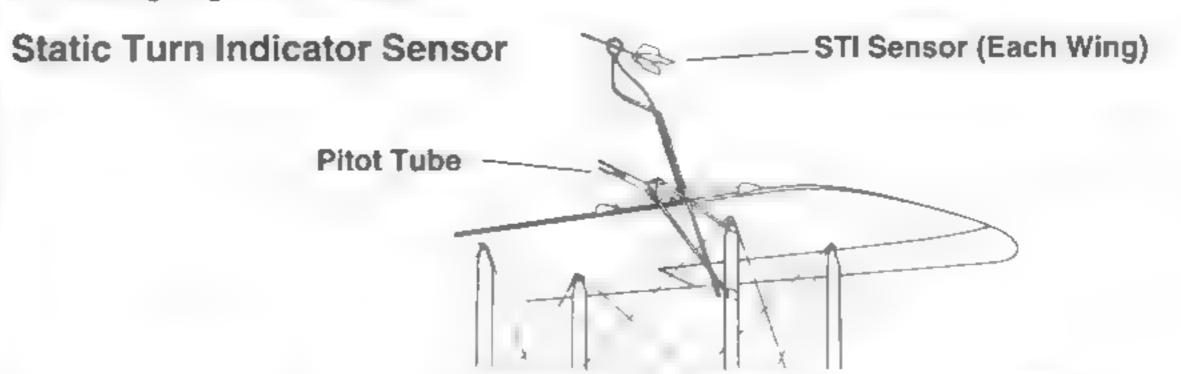




In addition to being used as test-bed for the Fiat A-12 engine, C6052 was also used for trials of the Static Turn Indicator at Orfordness. This instrument was mounted above both upper wing tips combined with pitot tubes. (G. Kinsey)



While at Orfordness C6052 was also fitted with navigation lamps. One lamp is visible on the trailing edge of the rudder.



The pilot's instrument panel of the Static Turn Indicator (SHTI) modified aircraft had a large horizontal dial for the instrument mounted immediately below the turn and bank indicator. Above this, in the center on a shelf, is the compass.





(Above/Below) Frederick Handley Page equipped a Puma-engined D.H.9 (serial H9140) with full-span leading-edge slots during 1920. These were auxiliary airfoils permanently fitted to give maximum lift, and increased the wing area by some 34 square feet. The standard undercarriage was later replaced by one with longer legs during September. The equipment was demonstrated by Major E. L. Foot at Cricklewood, London on 21 October 1921. The aircraft was flown against a standard civilian D.H.9 (G-EAUN) and the superiority of the slot-fitted machine (designated the HP17) resulted in an order for the similarly equipped HP19 Handley.

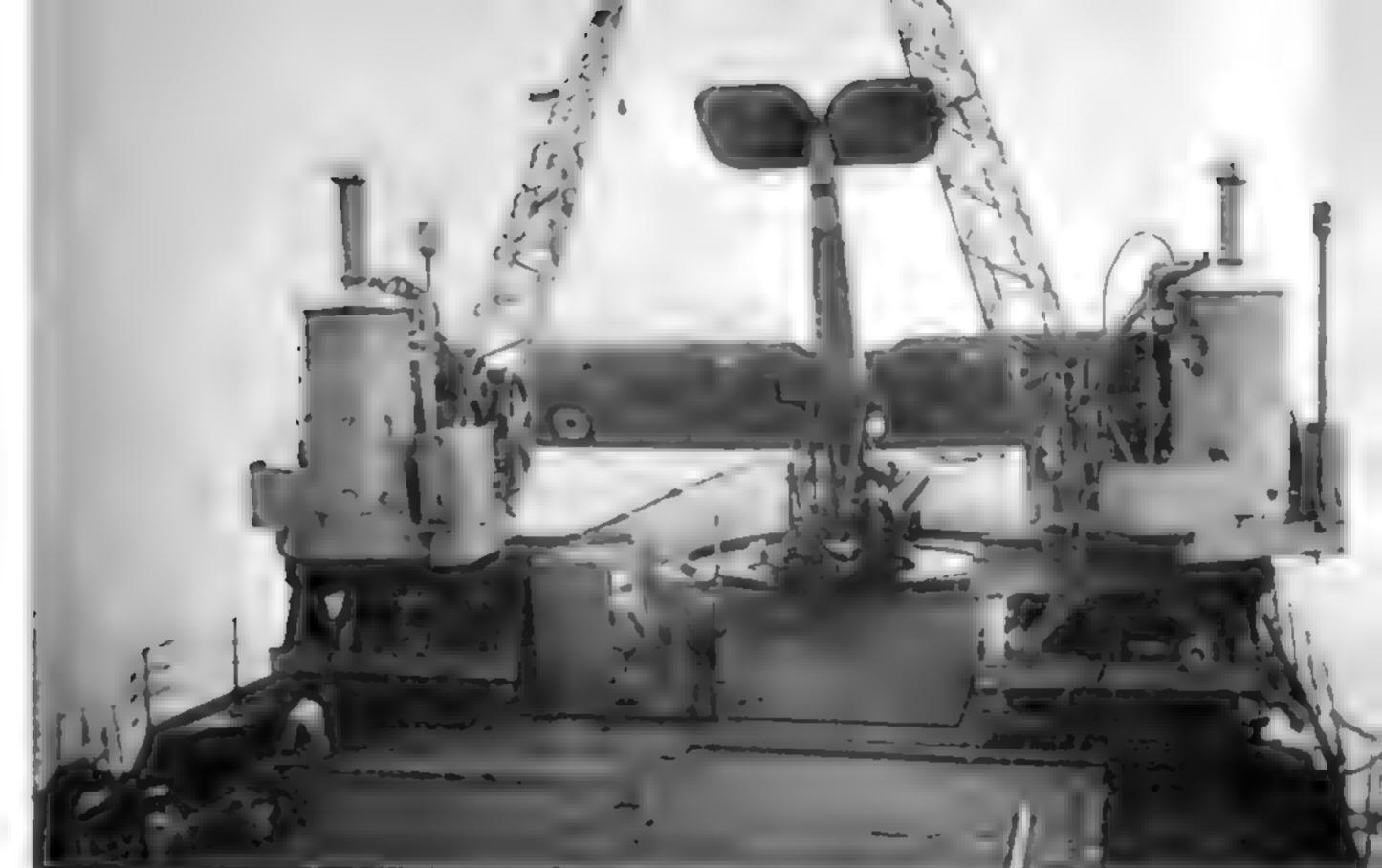




Sometimes described as a D.H.9 with a Mercedes-Benz radiator on the lower wings, the latest research indicates that it is more likely to be C1393, powered by a Fiat engine. The aircraft was flown with this engine at Farnborough, Hampshire on 8 December 1920.



A Puma-engined D.H.9 with a frontal radiator is parked forward of the island of the British fleet aircraft carrier, HMS EAGLE while another approaches to land. This vessel was commissioned in 1922, and at this time had transverse arrester wires. Later, fore and aft running arrester wires were adopted as standard.



This unidentified D.H.9 aboard the British aircraft carrier HMS ARK ROYAL in September 1929, has fallen forward on the vessel's catapult. It is in poor condition, heavily patched, and bears post-war national markings with all main components marked with a letter "B", with one of these obliterating the rudder serial number. Whether it has an engine is not clear, but it is certainly stripped of all equipment and has no wheel covers or tires. It is believed that this was a test airframe that was intended to be lost at sea during catapult trial launches.





This Puma-powered D.H.9 was fitted with the bulky and heavily-finned "Ad Astra" engine silencer as part of a series of trials. The prominent radiator has a drain cock on the underside and the aircraft was fitted with a four-blade propeller.



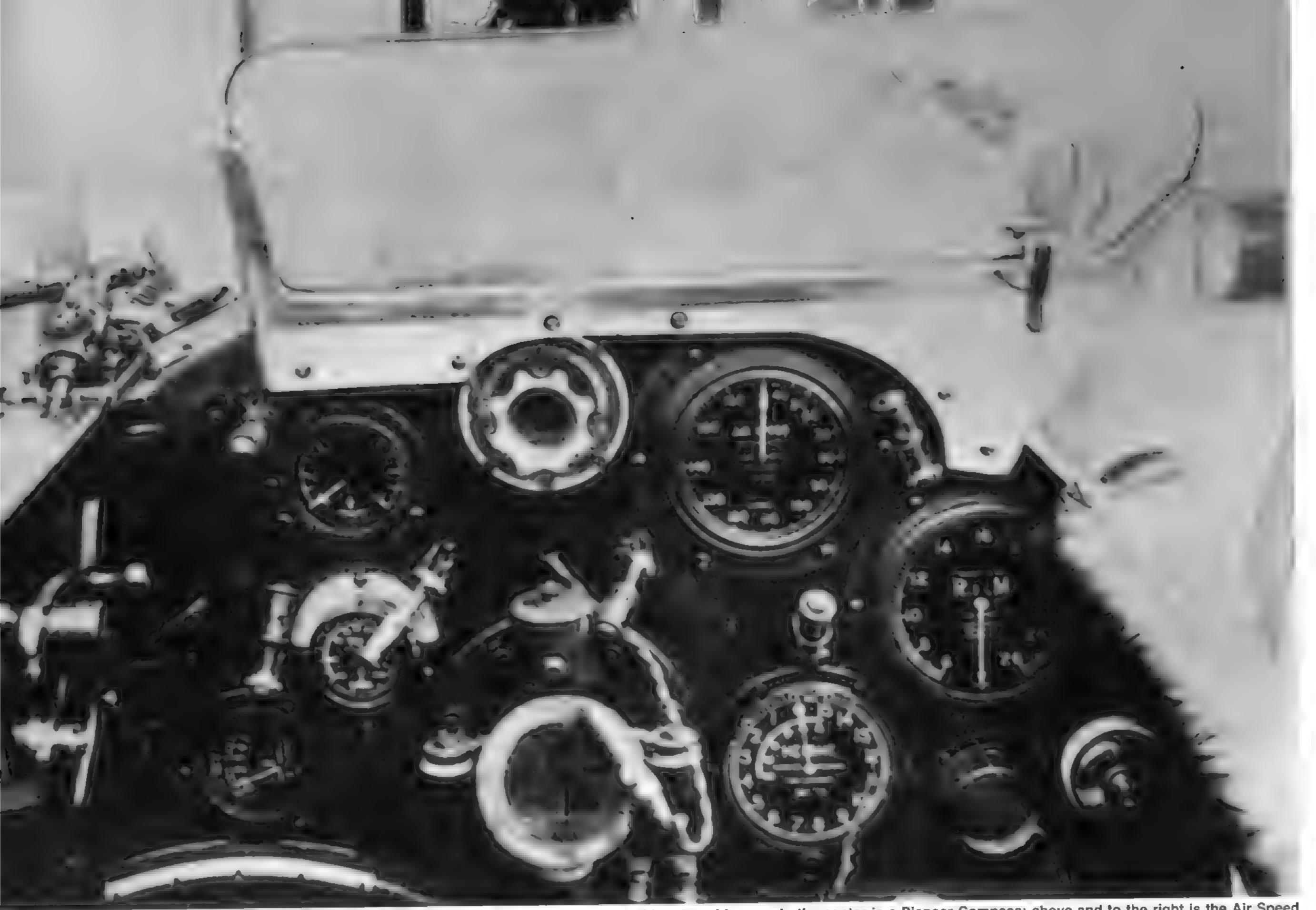
Armament experiments included the fitting of a downward-firing Lewis machine gun, evidently intended to be fired from the standard gunner's position and permanently aimed down and to the rear.



The prototype D.H.9 (A7559) fitted with a SHTI and powered by a Galloway Adriatic engine taken from D.H.4 (A7671) in place of the Siddeley Puma engine. The aircraft was used during May of 1918 at Orfordness to test a 230 pound underwater bomb, visible on the trolley in the center of the group.

This D.H.9 was powered by a 430 hp Napier Llon engine. The exhaust system of this engine had a rather complex shape.





The Instrument panel of a D.H.9 showing that some of the dials were illuminated with external lamps. In the center is a Pioneer Compass; above and to the right is the Air Speed Indicator and below it is the Altimeter. At the extreme right is the Revolutions Counter and below it is the Magneto switch. At the bottom left is the Turn and Bank Indicator, while on the extreme left is the cocking handle for the forward firing Vickers machine gun.

## New Colors and Fresh Uses

Although the career of the D.H.9 with the Royal Air Force was comparatively short, it was used by many other countries. In Europe, Belgium was the only member of the 1914-18 Allies to use the type operationally, although had the war lasted longer, a great number would have been used by the American Expeditionary Force, and two, minus engines had already been purchased in July of 1918.

Meanwhilé, although still operated by Nos 47 and 221 Squadrons, RAF, the type was to see service in Russia. At home a few were still performing coastal patrols in 1921, as part of the Mobile Squadron for Fleet Co-operation from Leuchars, this unit becoming the nucleus of the British Fleet Air Arm.

In September of 1921, the D.H.9 was officially declared obsolete, but not before several had seen fresh employment as pioneer mail-carriers.

Abroad, however, many countries retained the type in service, including Australia, Canada, South Africa, Poland and New Zealand, while the Netherlands East Indies Air Force (NEIAF) used D.H.9s in the ambulance role similar to those flown by the RAF's "Z" Force in Somalia.

Earliest of the mail-carriers were the D.H.9s of No 99 Squadron RAF, which joined the D.H.4s of Nos 42 and 57 Squadrons to inaugurate, on 17 December 1918, the first air mail service across the English Channel. This consisted of twenty-five bags for the Army of Occupation on the Rhine which were flown to Valenciennes en route for Cologne despite bad weather. In all, the combined squadrons made 917 sorties during the winter out of a possible 1,017.

(Right) A Belgian D.H.9 trainer of the Ecole de Pilotage with a PSV (*Pilotage sans Vision*) - blind flying hood in place over the front cockpit.

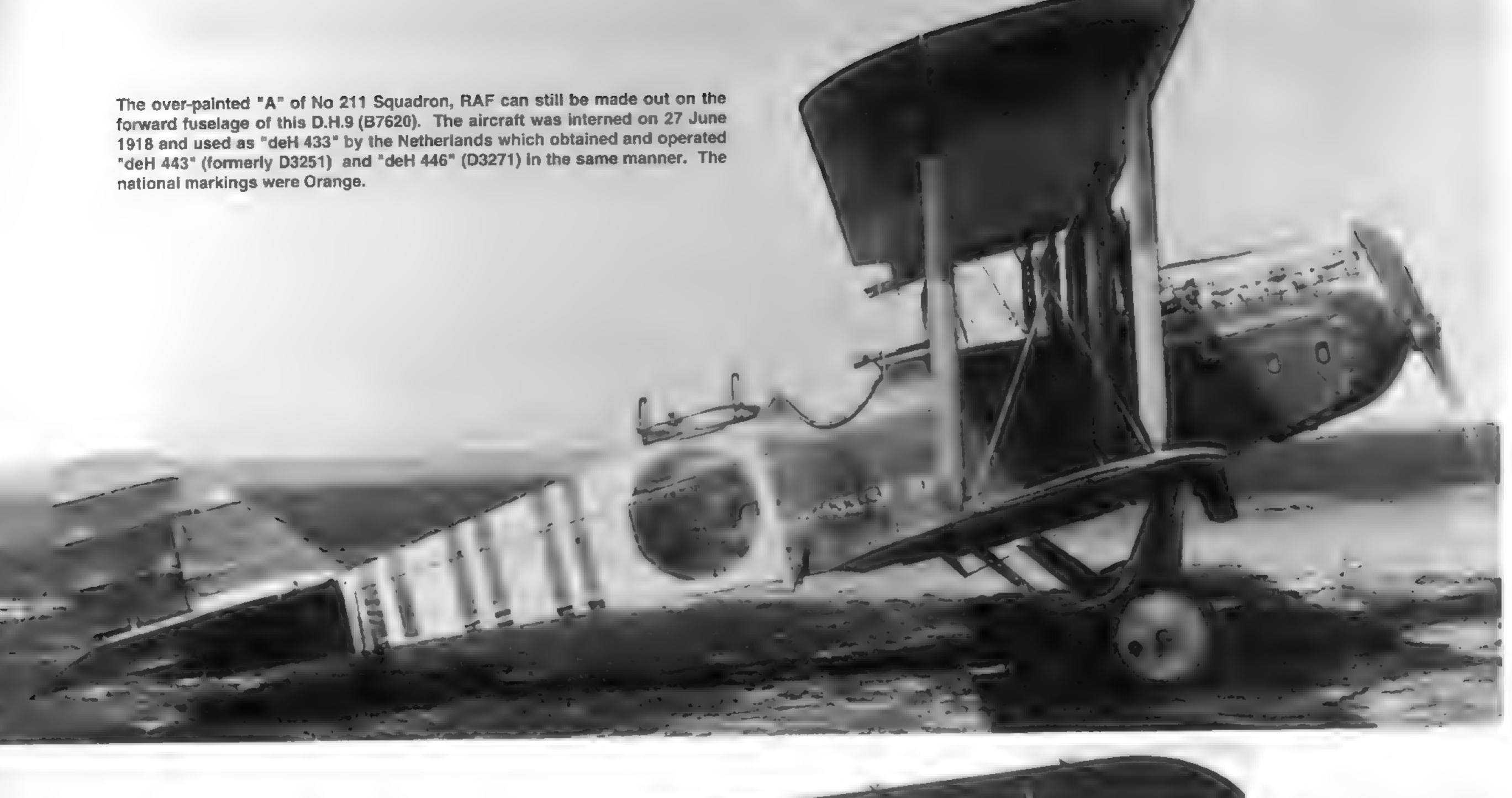
One of a pair of D.H.9s supplied to Afghanistan In December of 1924 by an unknown "Mr Murphy" who had purchased them from the Aircraft Disposal Company at Waddon, Surrey. They arrived at Peshawar during the same month and remained there through April of the following year, while allegedly awaiting delivery to Kabul.





Attached to Belgium's No 8 Squadron, F1201 with its Red, Yellow and Black national markings (Red at the rudder trailing edge and outer ring of the roundel). On 18 January 1919 it was waiting to go to Canada. Eighteen D.H.9s had been given to Belgium.







Another D.H.9 that landed in neutral Holland on 27 July 1918, was D2781, side code "M" of No 211 Squadron. The crew was Sergeants Good (pilot) and Partridge (observer). Sergeant Partridge was severely wounded when the aircraft was hit over Zeebrugge and died of his wounds a few days later.

This was one of No 120 Squadron's eighteen D.H.9s that operated as mail-carriers between Hawkinge, Kent and Cologne, France in support of the British Army of the Rhine. The first such trip by this Cubitt-built aircraft (D.6280) was made on 1 March 1919.







War surplus D.H.9 fuselages stacked for sale in the sheds of the Aircraft Disposal Company at Waddon, Surrey. There are two Warring & Gillow-built aircraft (F1270 and F1259) visible with their engines still in place. A great percentage of these machine would go to the innumerable civil operators and embryo airlines which sprang up in great proliferation after the end of the First World War in 1918.



With AW FK8 fuselages on the left, these D.H.9s were stacked awaiting customers at the Aircraft Disposal Company after the end of the First World War. The stack on the right included H9195, H9174 and H5779.

The D.H.9s were stacked to conserve space at the ADC. The rack running down the center aisle held Inter-plane struts. Some of the aircraft visible included; H5834, H5851, B5575, H9350 and H5829, all being either Alliance or Airco-built. Sales continued into 1924, but by 1931, all the aircraft remaining of this vast stock were taken outside and burned.



## D.H.9C

The D.H.9C designation was used by de Havilland to cover conversions of ex-military D.H.9s for civil passenger use. These aircraft were modified with an additional cockpit in front of the pilot and a rearward extension of the observer's cockpit, enabling the aircraft to carry three passengers, mail or light frieght, access to the rear cockpit was gained by the use of a fixed boarding ladder on the starboard side of the fuselage. There were a number of different D.H.9C configurations, some had the rear cockpit covered with a wood and fabric cabin roof. Other D.H.9Cs were made by the Disposals Company and were simply military aircraft with four cockpits, all in a row. Some sixty of these were later supplied to Rumania.

At this point in development of the D.H.9C, it was felt that there was a need to compensate for the aft movement of the center of gravity and the wings were given eight inches of sweep back measured at the outer interplane strut.

With all military equipment removed, the maximum weight of the D.H.9C was some 120 pounds lighter than the military D.H.9. The aircraft's maximum speed was 115 mph, cruising speed was 95 mph, the ceiling was rated at 19,000 feet and range was listed at 500 miles.

Some eight D.H.9Cs were used by the de Havilland Aeroplane Hire Service, flying hundreds of hours all over Europe. Other D.H.9Cs were used as trainers for Royal Air Force reserve pilots. These remained in service between 1923 and 1924 before being replaced by purpose modified D.H.9 two seat trainers.

The D.H.9C was introduced by the parent company during 1921. The aircraft had accommodation for two passengers on facing seats in the rear, and room for a third passenger or engineer in a cockpit in front of the pilot. This D.H. 9C, registered G-EBDD, was operated by the de Havilland Hire Service from 16 June 1922, the day its civilian certificate of Airworthiness was issued. The passengers boarded the aircraft by means of the fixed ladder mounted on the fuselage side.



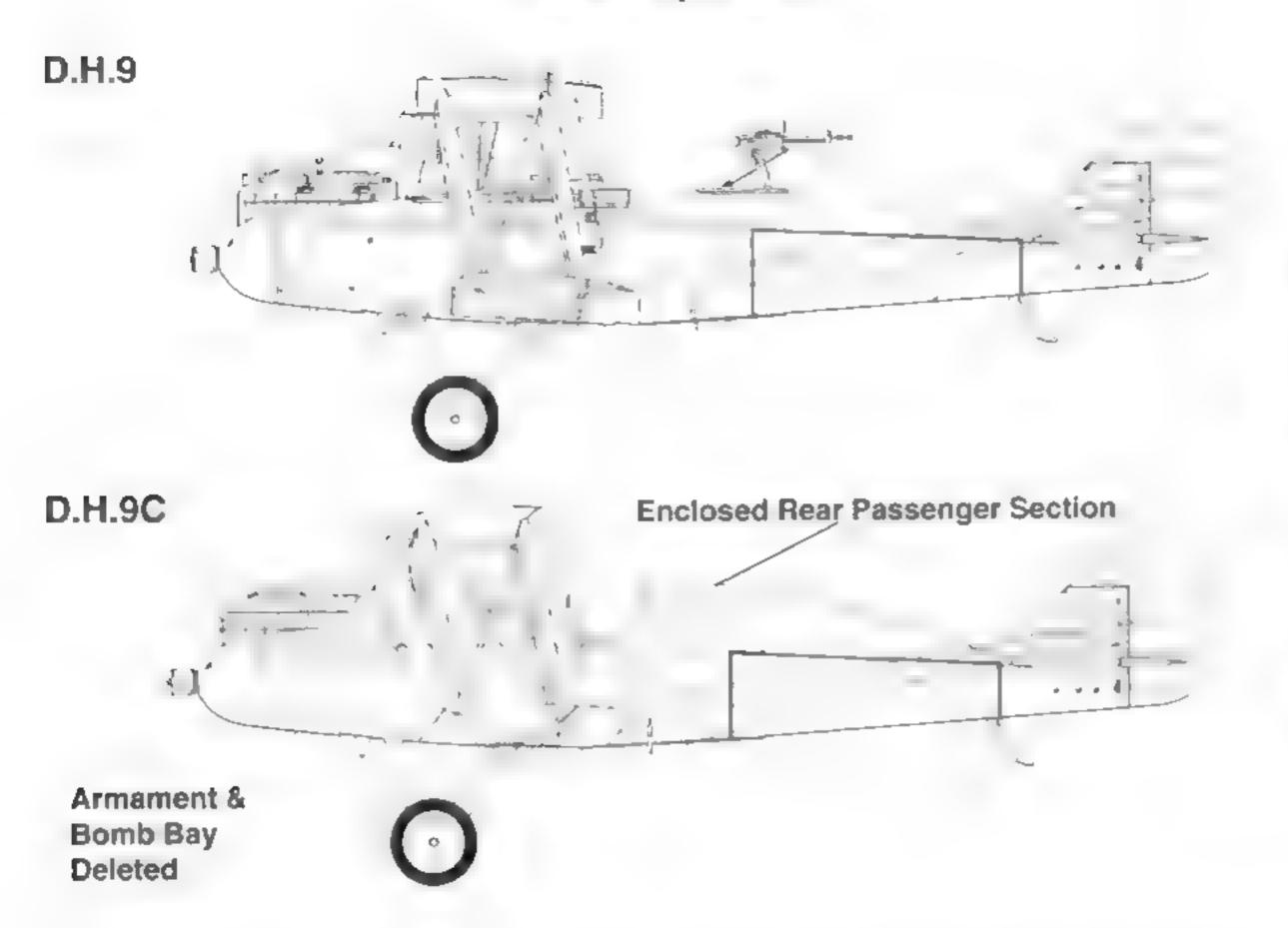
Formerly serialed H5889, this machine became G-EAOZ on the civil register on 17 June 1919, and was operated by the Aircraft Transport & Travel organization. The enlarged rear cockpit led to it being redesignated as the D.H.9B. It was passed to the Dutch company in July 1921, becoming H-NABF and flying for a total of 152 hours before being scrapped in 1924.

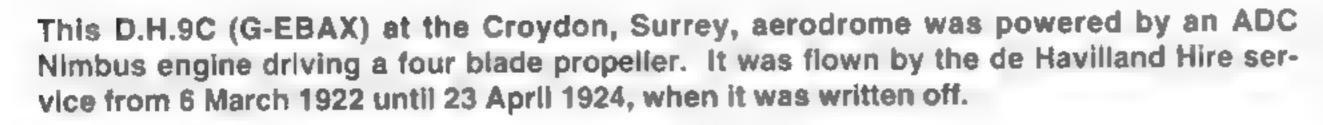
G-EBDO, was later modified with a cabin over the rear passenger seats, although access was no longer gained by the fixed ladder. It continued to be operated with this Improvement until 6 November 1925, when it was discarded.





#### Development







Flanked by a Handley Page W10 (G-EMBS) and Handley Page W8f (G-EBIX) on the ramp at Croydon, Surrey, this D.H.9, registered G-EBEP, was operated by Surrey Flying Services from May of 1924. It had accommodation for two passengers.

Formerly having the military identity H9255, this D.H.9 (G-EAGX) was operated by Aircraft Transport & Transport Ltd. and named "Ancuba." It was eventually sold to a Canadian operator in September of 1920.







This D.H.9, piloted by M. M. Pearcey and modified as a single-seat racer took third place in the King's Cup Air Race at Croydon on 8 September 1922.

Searching for alternative uses for ex-warplanes, the builders of the D.H.9s evolved the D.H.9R. The aircraft was fitted with a 450 hp Napier Lion liquid-cooled engine and sesquiplane wings based on the earlier D.H.4R. The D.H.9R made its first flight at Hendon, North London on 21 June 1919, and carried the early form of British registration, K141.

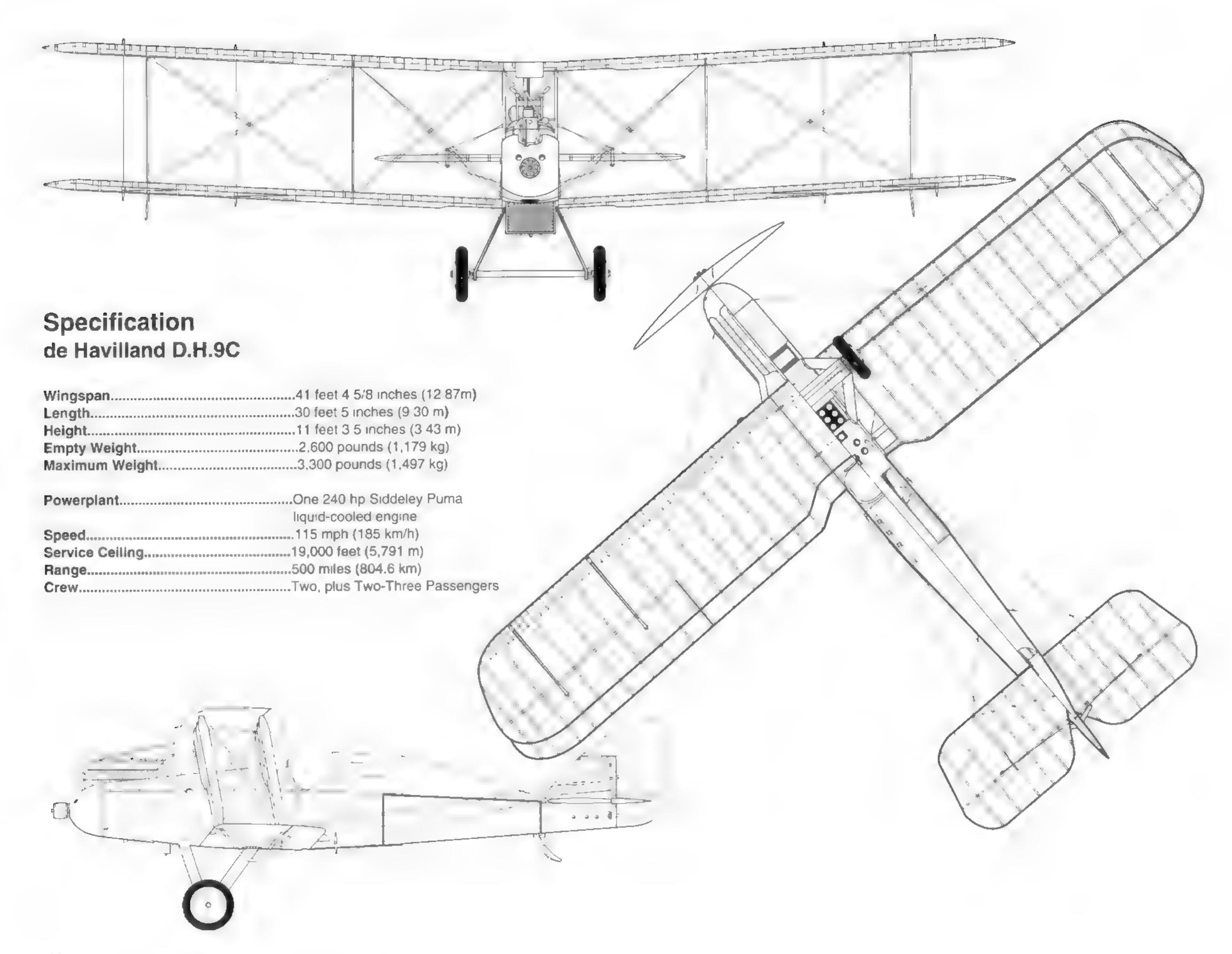




This D.H.9 (G-EBJR, formerly H-9289) was converted to floatplane configuration with twin main floats and a small float under the tail. The aircraft taxies on the River Medway at Rochester, Kent. It was sold to the British and Egyptian Tea Company, during late 1924. A similar floatplane was used for a photographic survey of the Irrawaddy River during 1924. It had all its military marking obliterated with PC10 except on the rudder, where it was still marked D568 over its RAF stripes. It also carried a White "2" on the nose

Surprisingly, the D.H.9R was entered in and won the 1919 Aerial Derby on the same day as its first flight. The aircraft was flown in the race by Captain G. Gathergood achieving a speed of 125.9 mph. It survived until June of the following year, now carrying the new alphabetical civil registration, G-EAEW.





# D.H.9J

The D.H.9J was a trainer variant that replaced the Puma liquid-cooled engine with a 385 hp Armstrong Siddeley Jaguar III fourteen cylinder, two row, air-cooled radial engine in a shortened, strengthened forward fuselage. The landing gear was replaced by a rubber in compression type landing gear and the ailerons were connected by an external strut.

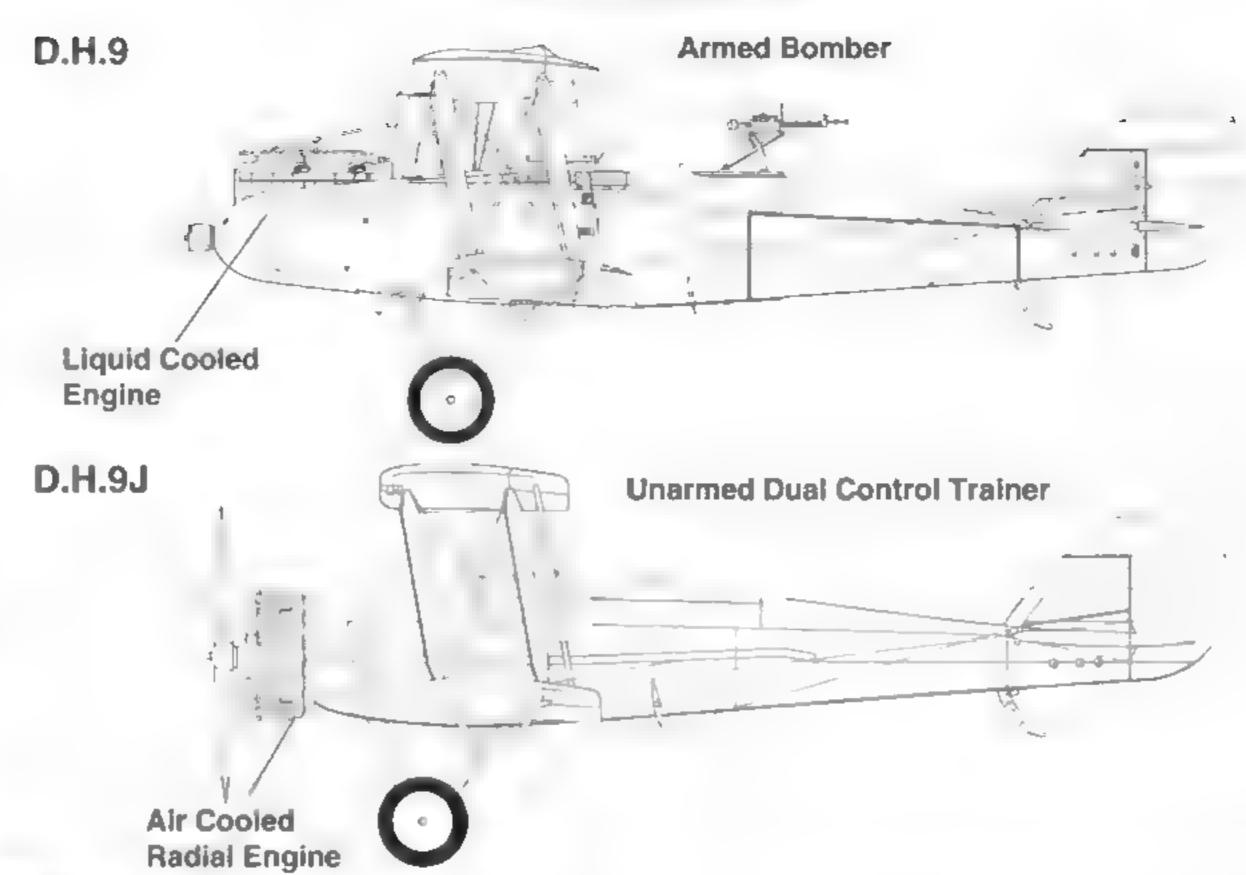
The fuel system was updated with the addition of a gravity fuel tank in the upper wing center section. This tank was used on approach when the air driven fuel pumps were being driven too slowly to give an adequate fuel flow. Due to the additional power available from the radial engine, a throttle stop was added to keep the crew from applying full power.

The student occupied the front cockpit and the instructor used the rear cockpit. This made it necessary to carry ballast whenever the aircraft was flown solo.

Most of the engines used on D.H.9J conversions were obtained second-hand after their removal from Armstrong Whitworth Argosy I passenger aircraft flown by Imperial Airways. Most had upwards of 4,000 flying hours, being overhauled and reconditioned prior to being installed on D.H.9 airframes.

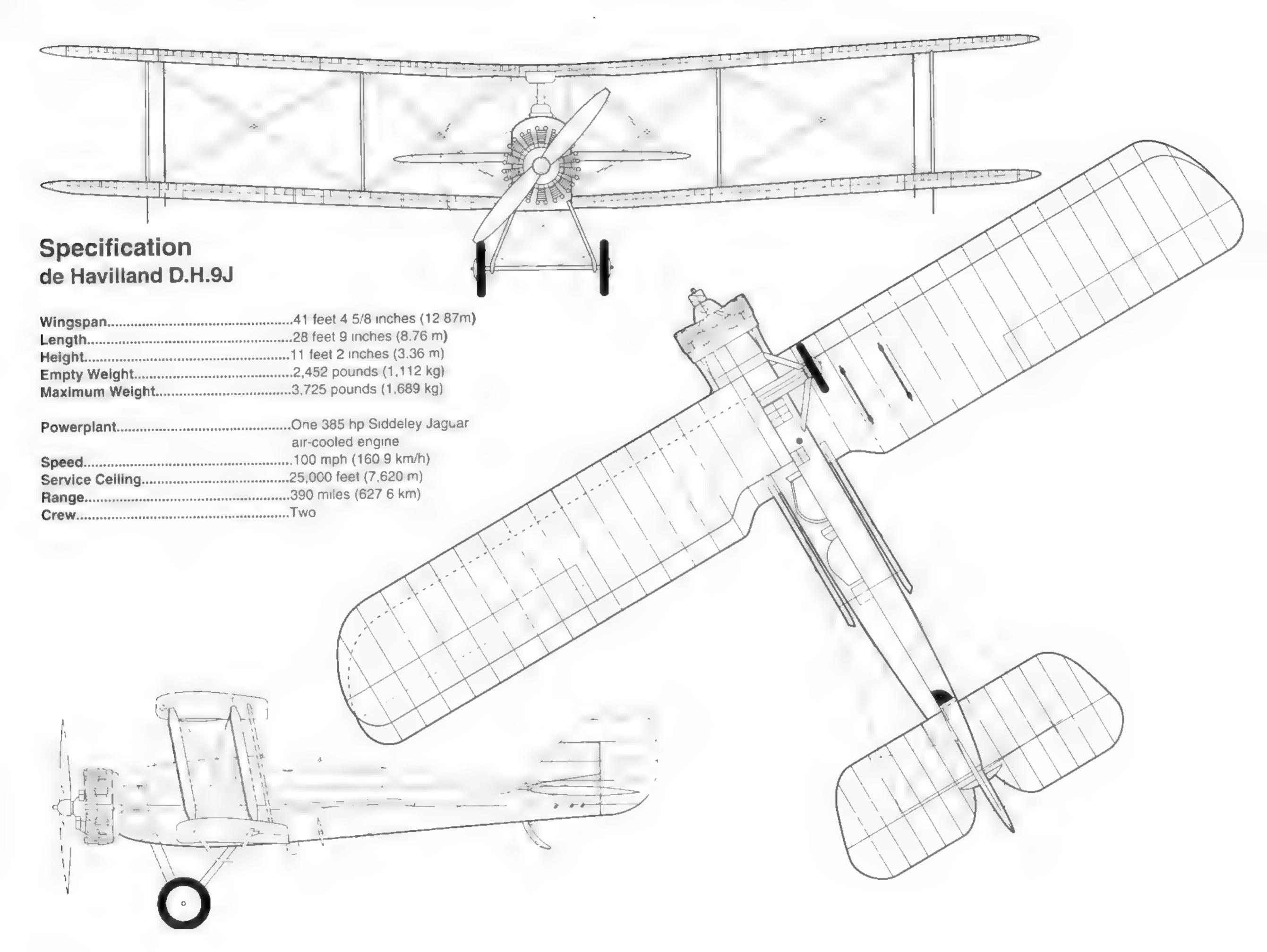
At least fourteen D.H.9Js were converted, with the last conversion being constructed during 1931. One operator, Hamble Air Service Training Ltd., retained their D.H.9Js until 1936.

#### Development



Formerly serialed H9277, this D.H.9, K-109, made the first British charter flight to Paris, France on 15 July 1919. The aircraft made the trip in two hours and fifty minutes with Airco's chief pilot, Captain H. Shaw at the controls. A few weeks later it was re-registered as G-EAAC. In March of 1921 it was used by the D.H. Aeroplane Hire Service with the rear fuse-lage converted for freight, and five years later with normal cockpits reinstalled, it was in use by the D.H. Flying School. (F. Cheesman)







Formerly having the RAF serial H5627, this D.H.9 was registered G-NZAE. The aircraft was at Nelson, New Zealand on 13 November 1921. (Jones Collection, Alexander Turnbull Library, NZ)

HS627/G-NZAE, was fitted with a locally modified passenger cabin and was used by the Canterbury Aviation Company for mail flights between Christchurch and Blenheim, New Zealand during 1921. (Jones Collection, Alexander Turnbull Library, NZ)







(Above) H. N. Hawker, was pilot of the D.H.9 (H5627/G-NZAE) used for the Inaugural Christchurch/Blenheim mail flight on 13 November 1921. The company name was not carried on both sides of the cowling. Canterbury also operated two other D.H.9Cs, H5636/G-NZAD and D3136/G-NZAH. (Jones Collection, Alexander Turnbull Library, NZ)

(Left) Mr. Lock, Nelson's Mayor, congratulates pilot H. N. Hawker (left) on his successful arrival after the inaugural mail flight to Nelson on 13 November 1921. Another Canterbury D.H.9C (G-NZAH) made the first flight between Gisborne and the New Zealand capitol at Auckland, beginning regular service between these cities. The retractable radiator is in the full down position. (Jones Collection, Alexander Turnbull Library, NZ)



H. N. Hawker (wearing cap) with his passengers on 13 November 1921 at Nelson, New Zealand. The passengers on this flight were Mr. Perado and Mr. McArtney (right). The company name was in White and carried only on the port fuselage side. (Jones Collection, Alexander Turnbull Library, NZ)



Mr. McArtney (extreme left) looks out as a mail bag is handed to N. Hawker the pilot of the modified D.H.9 (H5627). In the advertising of the day, the aircraft was described as 'the de Havilland Limousine." There were two hatches over the passenger compartment and small windows were provided on each side of the fuselage or the passengers. (Jones Collection, Alexander Turnbull Library, NZ)

### **Preserved Aircraft**

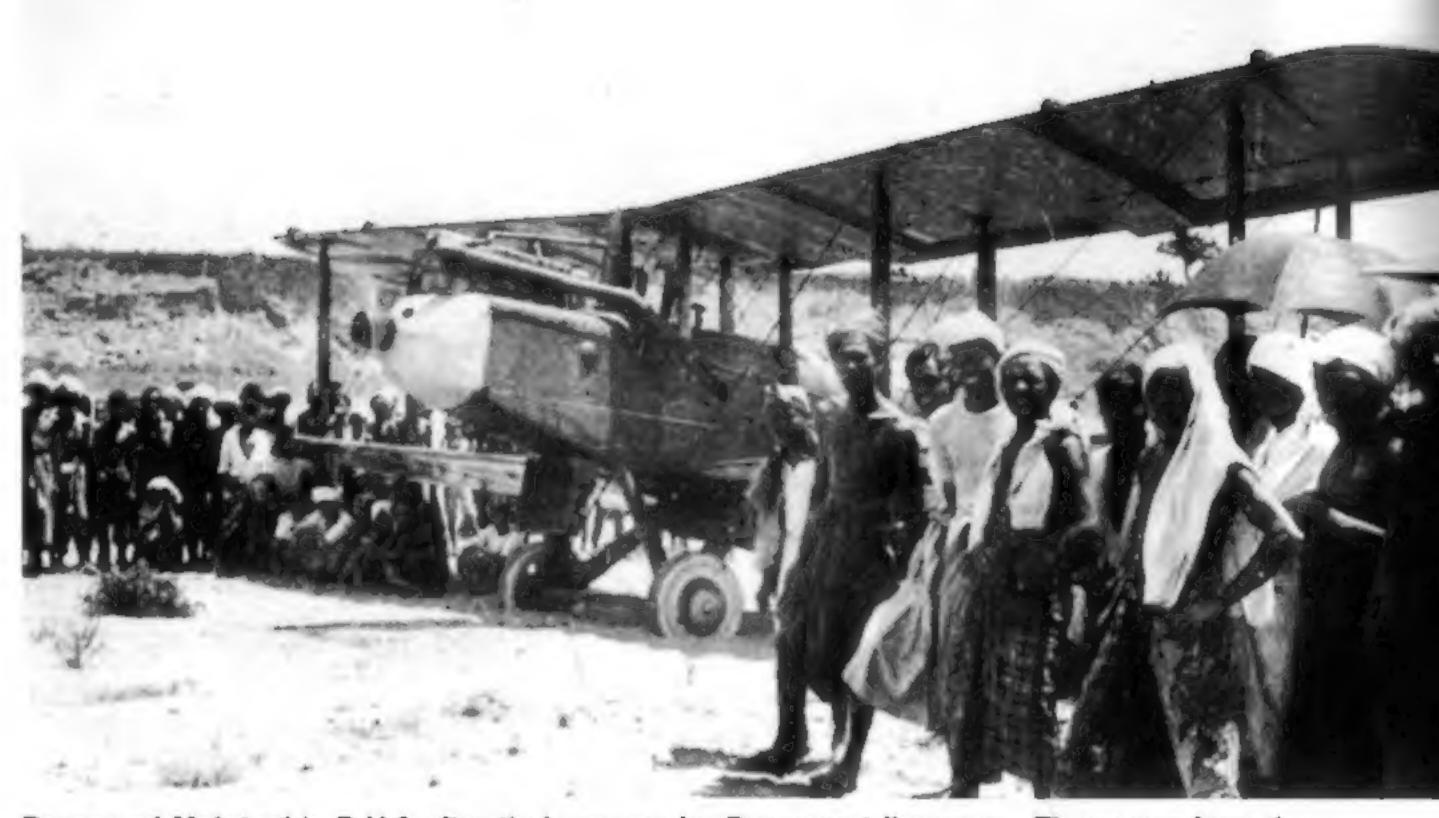
Despite the fact that over thirty squadrons of D.H.9s were planned (but never achieved) and that it existed at a time when many would survive the war and could be expected to enjoy longevity in the civilian field, only three examples of the type now exist. One of these is I.S 8, a D.H.9 that had been modified as a trainer in South Africa, where the type was still to be found as late as 1938. This preserved machine was the last of the forty-eight which were part of an Imperial Gift to South Africa delivered during 1920.

Of the remaining pair, only one represents the D.H.9 as it appeared over the trenches of the Western Front. This aircraft (serial F1258) was powered by a Puma engine and built under sub-contract by the London furniture manufacturers of Waring & Gillow during 1918. It is now exhibited in the La Grande Gallery at El Burgess, France. It was a presentation machine subscribed for by A Battery, 2nd Siege Artillery Reserve Brigade and carries the presentation marking on the starboard side. It was beautifully restored in recent years and is the only authentic representative of a First World War D.H.9 existing in the world.

The final survivor represents an aircraft as used in the civilian field for pioneering flights around the globe. It is the former F1278 which was flown by Lieutenants J. C. Mcintosh and R. J. P. Parer from England to Australia in 1920, the first single-engine aircraft to complete the trip. It was originally purchased from the stock of surplus warplanes held by the Aircraft Disposal Company at Waddon, Surrey. Such were the rigors of the journey that it took some seven months to complete the flight. Acquired by Parer's old school by the Australian War Museum, it was unfortunately allowed to deteriorate over time, and it was only saved by the work and study lavished on it over a thirteen year period by the Australian Society for Aerohistorical Preservation. It is now an almost perfect representation of its original appearance, although details of the nearly obliterated logos on the interplane struts are still sought. Indeed, so accurate is the restoration that the uneven application of the registration, G-EAQM has been copied.

The restored Australian D.H.9 at RAAF Richmond for the Bicentennial Air Display during 1988. Wheel covers, water feed pipe and starboard engine cowling panels have since been added. The letters 'PD' stood for the aviator's chief sponsor, the whisky manufacturer Peter Dewar.



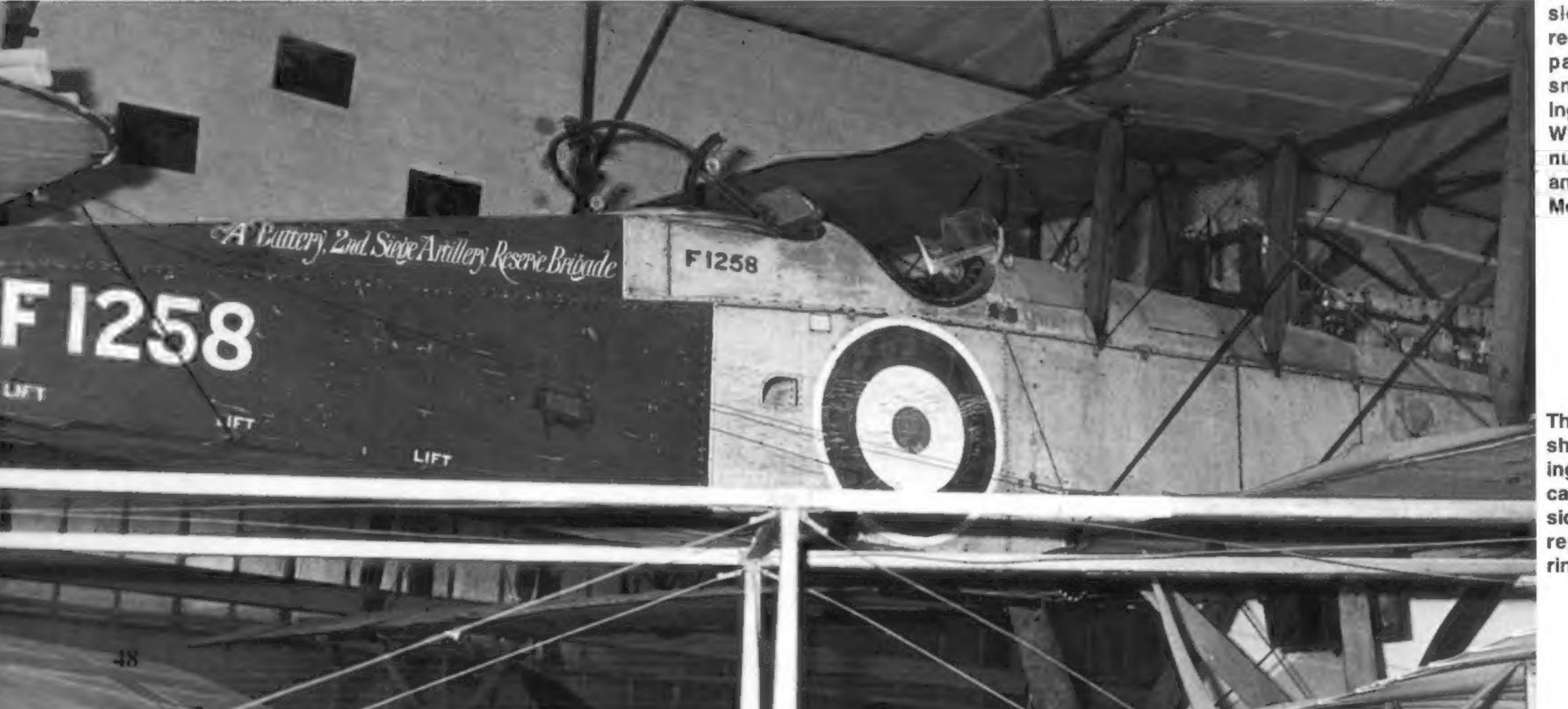


Parer and McIntosh's D.H.9 after their rescue by Burmese tribesmen. They were forced to make a crash landing on an Irrawaddy River sandbank. The aircraft still has its original radiator which was later lost in a crash at Moulmein. The wheel covers have a dark circle marking.

G-EAQM after a crash-landing at Moulmein which destroyed the undercarriage, broke the propeller, crumpled the radiator and crushed both the fuel and oil tanks. The TEA advertisement across the fin and rudder was for Liptons, a temporary sponsor acquired in Calcutta. It was later painted out at Singapore.





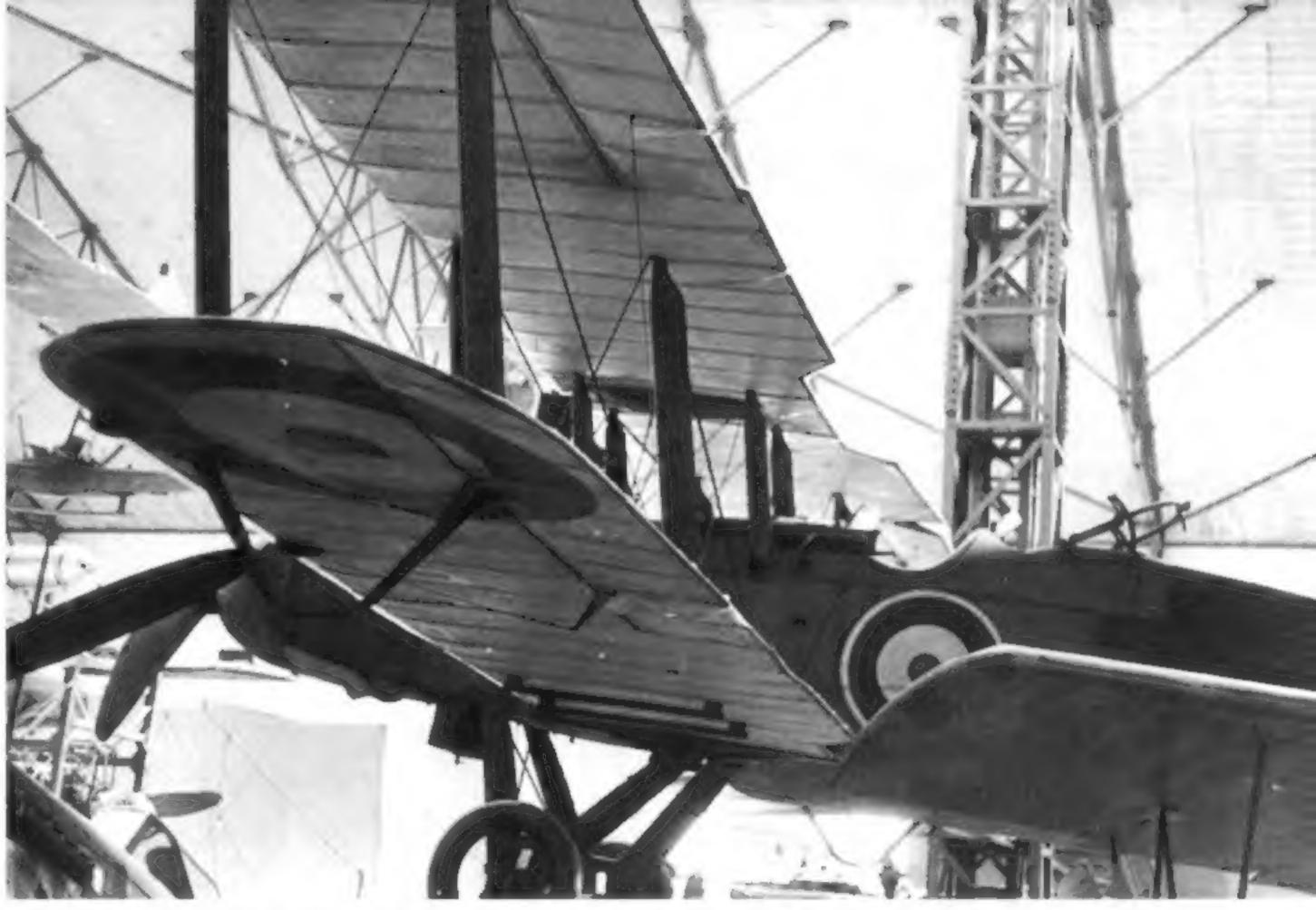


F1258 at Chalais Meudon, outside Paris, France before it's restoration. The aircraft had patched rudder fabric with small stenciled factory markings appearing at the top of the White rudder stripe. The serial number on the rudder had the 1 and 8 outlined in White. (R. G. Moulton)

The forward fuselage of F1258 shows the presentation markings. The White inscription was carried in full on the starboard side only. The serial number is repeated under the gunner's ring in Black. (R. G. Moulton)



Details of the undercarriage of F1258 also show the retractable radiator which gave a degree of engine temperature control and the observation cut-out in the wing root of the lower wing. This aircraft has no wheel covers. (R. G. Moulton)



A pair of bomb racks are installed under the lower wing. The pilot's .303 inch Vickers gun is visible to the left of the cockpit. This gun was intended for forward defense and not for air-to-air combat. (R. G. Moulton)

The nose of F1258 bore crudely applied numbers (2895) before restoration. These numbers were only semi-legible and were thought to have had no historical significance. (R. G. Moulton)

